

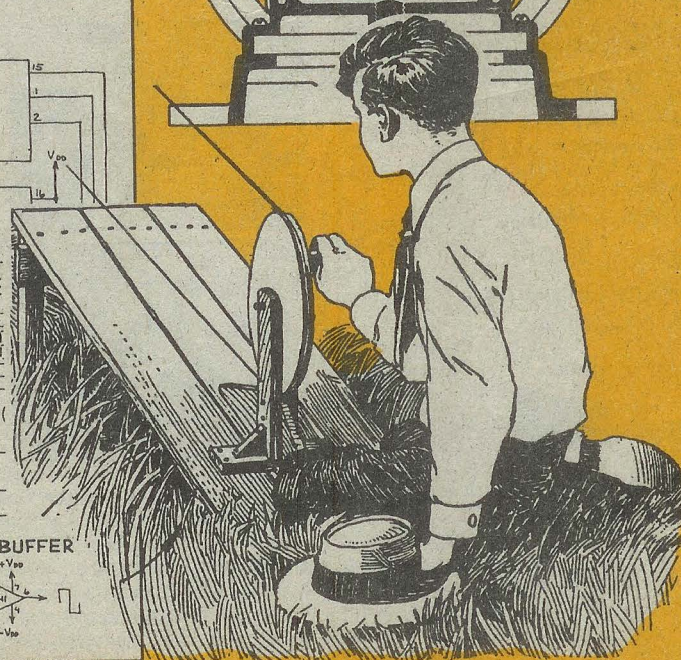
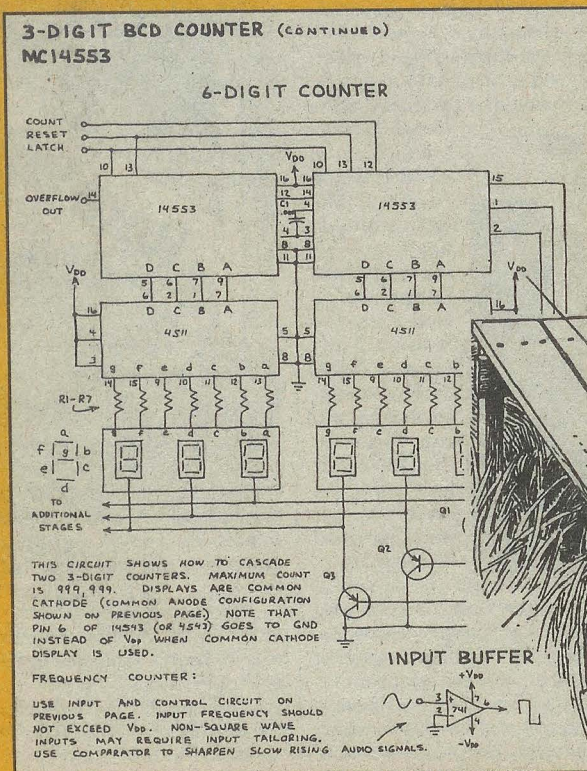
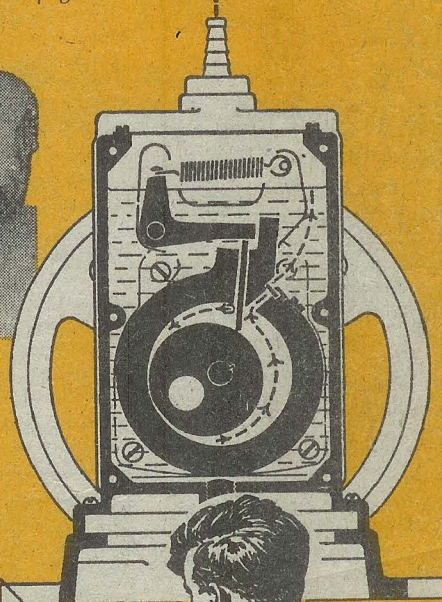
SECRETS!

(...secrets you aren't supposed to know!)

Unusual technical books, past and present, of exceptionally high quality revealing skills and secret processes almost forgotten.



(left) Producer Gas for Motor Vehicles page 3 (below) A Manual of Vacuum Practice page 33



(left) Mims Engineer's Notebook page 5 (right) Boy Mechanic Vol 3 page 7

LINDSAY PUBLICATIONS INC
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WINDMOTORS!

WINDMOTORS

by F. E. Powell
reprinted by
Lindsay Publications

Put the wind to work with one of these turn-of-the-century designs.

You'll learn about different types of windmills, some of them unusual. Then you'll be shown how to build a model tower windmill similar to those in Holland.

Chapter 3 will show you how to build a real power-producing windmill with three foot diameter sails. It may be a small windmotor, but it can drive a small dynamo. You get all the important design details.

In Chapter 4 you are shown how to build a 6 foot diameter windmill capable of driving a 30 watt dynamo at 16

mph. You'll see many detailed drawings showing how the all-wood machine is built, and how metal gearing brings the power down to ground level.

Another chapter reveals a 10 foot diameter windmotor. The last chapter gives you tips on generating electricity—high tech in 1910! Obviously better generators are available now, but the basic principles still apply, and the control methods still work.

I think you'll enjoy this book. These mills may not be as hot as modern designs, but building one of these babies should be relatively easy and low-cost. You get great designs from a simpler time when simpler materials were used to get surprisingly good performance.

A really nice little book to have. Low cost. Get a copy.
5 1/2 x 8 1/2 softcover 88 pages well-illustrated
No. 4279 \$6.95

SAMSON OIL-RITE WINDMILLS

by Stover Mfg. and Engine Co.



Just about every farm at the turn of the century located in the Midwest and Plains states had a windmill to pump water for livestock. Here's the sales

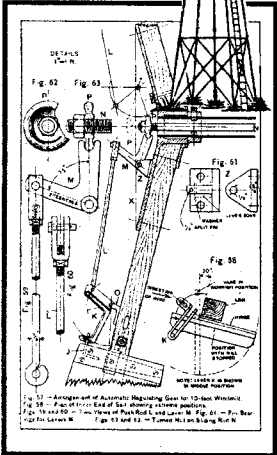
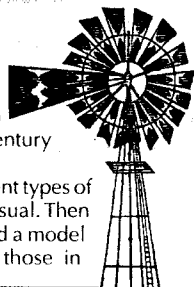
catalog for one of the leading manufacturers of those mills.

You'll see all the mechanical details: the gears, bearing, vanes, pumps, and the rest. And you'll get complete specifications.

If you're interested in wind power, this is a great reference, since these mills were built to perform and last. I'm sure many are still in operation. If you're going to design your own windmill, it might pay to look at a proven design. And besides, the price is right. 8 1/2 x 11 booklet facsimile reprint 22 pages

No. 2011

\$4.95



BUILD AN ELECTRIC CAR!

CONVERT IT

by Brown & Prange

"A step-by-step manual for converting an internal combustion vehicle to electric power."

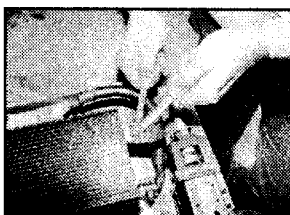
"Convert It takes you by the hand through the entire process of converting an internal combustion car to electricity, from choosing a donor car through removing the internal combustion system, installing the electric system, and all the way to driving, charging, maintenance—and talking with reporters..."

Michael Brown is an experience mechanic and has been building electric vehicles for years. In fact I offered his first book years ago. It was a good book. This is better, I think.

You CAN build an electric vehicle, and get clean, low-cost performance. In fact they cost about a third of what gas car costs to run.

Why don't we have electric cars? Simple. Most auto owners are knuckleheads. How many people do you know who can change their own oil? I don't know many. Can you see them trying to understand lead-acid cells and recharging?

And people are so spoiled by gas autos that the



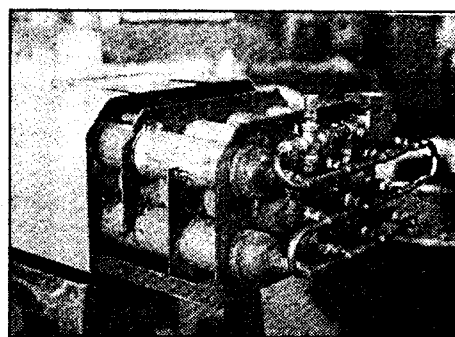
lower performance of electrics would never sell. The fact is, that if you have at least some interest in technology (and if you are reading this catalog you must) and realize that electric cars are not dragsters or luxury cars, you are well on your way toward building one.

don't have to be an engineer, just someone who likes to tinker and innovate. For us machinery is fun and fascinating. Detroit is not about to market an auto when most of the American population is addicted to but yet terrified by technology. In other words, this is technology that works, but for now, it will only be accepted by people comfortable with machines—people like us. For that reason I want you to give this serious consideration.

Good book. Nuts and bolts. Photos. Great info from an experienced builder. Get a copy. 8 1/2 x 11 softcover 128 pages

No. 3056

\$14.95

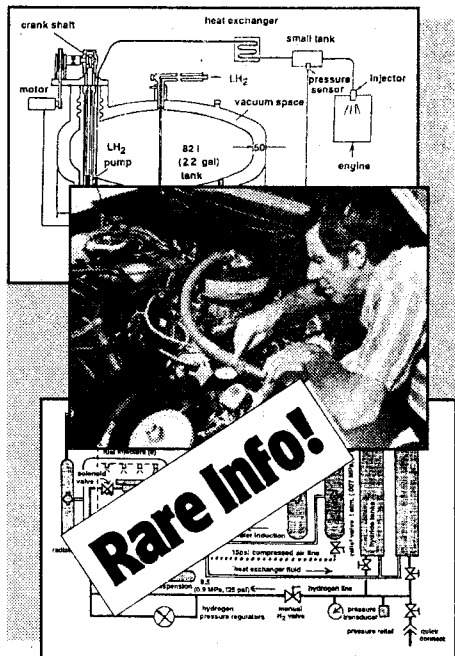


Hydrogen Fuel!

FUEL FROM WATER

by Michael A. Peavey

Here's the best book of its type that I've seen yet. You'll read about hydrogen generators, storage devices, modifications of autos for using hydrogen fuel, the hydrogen homestead and more. You get lists of manufacturers, other books, and sources of additional information.



Chapters include electrolysis production of hydrogen, chemical hydrogen production, fuel from trash, storing hydrogen, engine modifications, electricity from hydrogen, stationary applications, safety and the hydrogen economy.

You get both practical how-to and lots of commercial how-to that might be too expensive or difficult for you to use. But even the high end equipment will offer ideas that you might be able to use.

Hydrogen can be useful not only for powering automobiles and other engines, but it can be used to store energy generated by windmills. Why store electricity in lead-acid cells if you just want to heat your house? Burn the hydrogen in a motor-generator unit to convert it back to electricity when needed. These are some ideas to consider.

Excellent book. Great theory. Great ideas. Loads of useful illustrations. We've sold countless copies of this book over the years. Rare information. Get a copy. I think you'll like it. 8 1/2 x 11 softcover 250 pages

No. 2010

\$19.95

PRODUCER GAS FOR MOTOR VEHICLES

by John D and Martin G Cash
reprinted by Lindsay Publications

A few years ago I bought the last few hundred original copies of this 1943 book. They had been found in a warehouse in Australia. After I sold them all, I tried to convince my suppliers to reprint it. They couldn't do it. After several fruitless attempts to find the authors, I just decided to reprint it myself. It's too good not to.

Here you get the secrets of powering an automobile on coal, coke, charcoal, and even wood using successful techniques developed in Australia and Europe.

The preface reads: "The dangers which in 1940 threatened to cut off our petrol supplies, and thereby revived public interest in the gas producer have now passed the threatening stage and are in fact in operation. Lack of shipping space; lack of credits, the necessity of conserving our international balances, the entry of Japan into the war against us all combine to make the conservation of our petrol supplies a stern necessity."

Gas producers are now to be seen everywhere supplying in the aggregate millions of miles of travel-service which would not otherwise be supplied. It may well be that the gas producer's greatest service to Australia is only just beginning..."

These days gasoline supplies could be greatly reduced at any moment, not by a war with Japan, but by mid-Easterner's not being able to get along with themselves. We're far more dependent on Arab oil than most people realize. It could be the early 1970's all over again with gasoline shortages.

Build an experimental gas generator and bolt it to an old car. Other people build race cars that move fast. When the oil shortage comes, your charcoal powered auto might be the only auto moving at all!

Nuts and bolts how-to. Details you're not going to find anywhere else. A lot of rare information for the money. Get a book and shelve it, even if you don't build a generator. You'll have it when you want it. I won't have to tell you "I don't offer it anymore" when you finally do decide to build and want a copy. Get one NOW. 5 1/2 x 8 1/2 paperback 194 pages
No. 21877

\$12.95

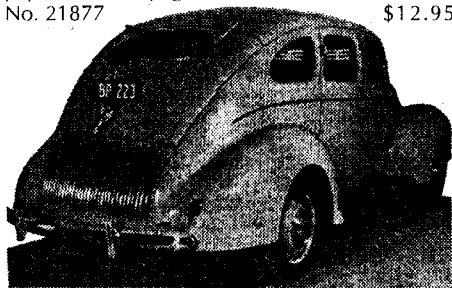


FIG. 11. FORD V8 CAR WITH GAS PRODUCER FITTED IN THE BODY WORK

CONTENTS

Heat Power And Energy • Theory Of Producer Gas • Fuels For Gas Producers • The Generator • The Scrubber • The Cooler • Fitting Gas Producers To Motor Vehicles • Means Of Overcoming Power Loss • Driving Of Vehicles On Producer Gas • The Maintenance Of Gas Producers • Future Developments Of The Gas Producer • French Producer Gas Plants • English Producer Gas Plants • Australian Producer Gas Plants • Suggestions For Designers • Operating Costs Of Producer Gas • Trends Of Australian Design • Appendixes • Index

Run Your Car on Wood, Coal, Coke, Charcoal!

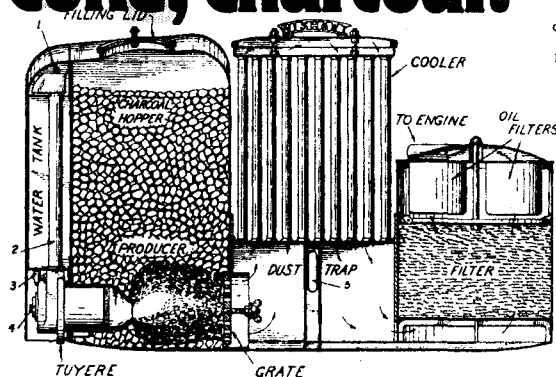


FIG. 10. WHEAT PRODUCER GAS PLANT, TRUCK TYPE

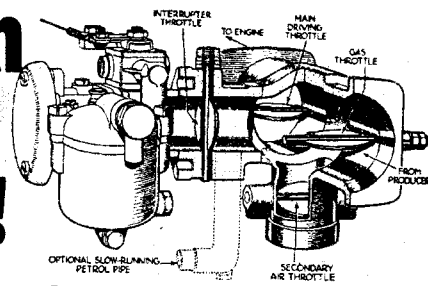
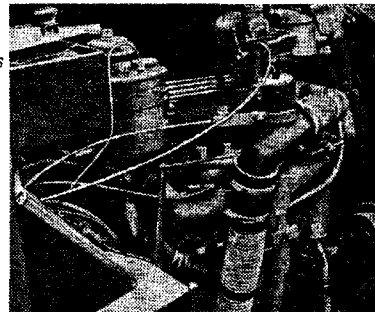


FIG. 19. THE SOLEX GAS-PETROL CARBURETTOR



excerpts from PREFACE TO FIRST EDITION

...In the year 1860 Lenoir invented the first successful gas engine, which operated on coal gas. This gas was expensive and required large equipment for its manufacture. The natural outcome of this was the introduction of a system whereby large quantities of gas could be made quickly, with comparatively small equipment and from low-priced fuels such as coke, charcoal, wood etc. The gas producer satisfied all of these points and so was slowly introduced.

Among the earliest recorded gas producers were those of Birchhof (1839) and the Siemens brothers (1857). It is probable that both these plants were of the pressure type. The first suction gas producer was invented by Dr Jacques Arbos of Barcelona in 1862.

The history of the motor car itself extends back little farther than the beginning of this century, and the history of the gas producer as applied to the motor vehicle almost as far.

Between the years 1900-1903 an Englishman named Parker drove first a 2 1/2 h.p. and later a 25 h.p. motor car over a distance of 1000 miles with results not wholly unsuccessful.

When the 1914-1918 war broke out the mobile gas producer had not reached the stage where it was even considered as a substitute for petrol. Consequently the war retarded its advancement and little more was heard of it until the high price of petrol in England about 1922 gave it a new lease of life.

With the onset of the economic depression in Australia in 1929 and the sudden rise in the price of petrol, due to a combination of increases in duty and tax and to the adversely altered exchange value of Australian currency, a new interest in the gas producer for motor vehicles was aroused, more particularly in South Australia and Western Australia.

By 1930-1931 a number of plants had been fitted to tractors and trucks and even a few cars. These plants were experimental and usually very cumbersome.

With an improvement economic conditions and a fall in the retail price of petrol in the years 1933-1935 interest in the gas producer waned to a considerable extent. This comparative lack of interest continued until the outbreak of the present war when producer gas began to hold unparalleled interest for all owners of petrol-driven vehicles, and indeed for the community in general.

The modern gas producer is made up of three distinct elements, the efficient functioning of each being the deciding factor in the results achieved by the plant as a whole. These elements are:

1. The generator in which the fuel is burnt to produce the gas ultimately used in the engine. This is usually a cylindrical or rectangular metal container holding the fuel and into which air is admitted by means of either a grate or tuyere.

2. A scrubbing or cleaning element which removes from the gas any of the impurities it may contain. The means of achieving this result are either dry or liquid cleaners, or in some cases a filter through which the gas is drawn.

3. A cooler or radiator. As the gas is generated from the fuel by means of a fire, the temperature of which is very high, it will have a correspondingly high temperature which results in a loss of engine power if it is not first cooled down to a temperature of about 130° F. This is done in the cooler, or radiator as it is often called, by passing the gas through a number of pipes which are air-cooled.

In addition to the units just mentioned there must be some apparatus in which the producer gas and air mix to form a combustible mixture....

It is hoped that this book may add something to the general knowledge of this subject... Engineers, garage men, students, and experimenters will find the book helpful and thought-provoking...

GIANT COLLECTION OF ELECTRICAL PROJECTS!

HOW TO MAKE THINGS ELECTRICAL
compilation by UPS Book Co
reprinted by Lindsay Publications

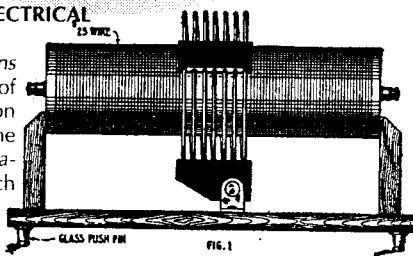
Here you get a collection of short, nifty electrical collection articles that first appeared in the pages of *Popular Science Magazine* just after World War I. Each is illustrated, and regardless of whether or not you build anything, you'll enjoy what you get here. This is a sort of electrical equivalent of the *Boy Mechanic* books.

Some of this not worth doing. Do you really want to build a toaster? But the Tesla coil that gives a 12" spark is very interesting (you may have seen it reprinted in other books). You might want to try making the electric cannon, the magnetograph, and electroscope, and more. If you're careful, you might want to try to make a selenium photo cell. You get numerous articles relating to motors, testing them and repairing them. You can make a water rheostat, a storage battery, arc furnace, simple arc lamp (I can smell the ozone, now), and much more.

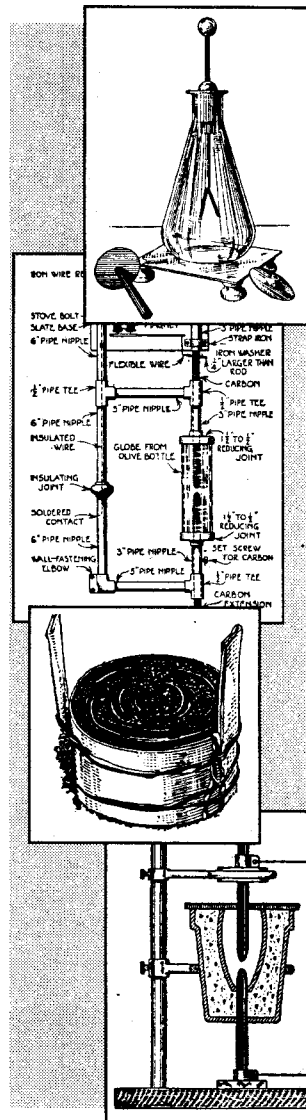
Great ideas. Lots of fun. Something for everyone. Get a copy.

Just a few of the topics discussed!

How to Make an Electric Fireless Cooker, An Alarm That Rings by Sound, Make Your Own Electric Toaster, An Electric Stop for the Phonograph, Make the Alarm Clock Turn on the Light, Lighting the Gas Stove with an Electric Spark, A Simple Socket for Small Electric Battery Lamps, The Pocket Flashlight May Become a Spot-Light, Immortalizing Baby's First Shoes, Home-Made Electrical Device Keeps Cigars Moist, Locating a Projecting Nail in a Shoe by Flashlight, Taking Care of the Storage Battery, Making a Wet Battery from Ordinary Dry Cells, Did You Forget to Put Out the Cellar Light?, A Suggestion for Lighting a Club-House, How to Use an Old Nitrogen-Filled Lamp, A Milk-Can Vacuum Cleaner, A Small Motor Used to Open Large Doors, An Indirect-Lighting System for Your Own Home, A "Loaded" Door-Bell Button, How to Reduce Polarization in Sal Ammoniac Door-Bell Cells, Repairing the Wires on an Electric Iron, A Reliable Solution for the Electro-Deposition of Aluminum, A Reel for Winding Up an Electric Test Cord, An Electrical Spot-Light for the Sewing Machine, The Underwriter's Knot for Flexible Cords, A Fire-Alarm to Be Attached to an Oil Heater, An Alarm to Announce the Charged Storage-Battery, An Inexpensive Electric Coffee-Pot, Why That Sewing Machine Motor Slips, How to Make a Miniature Electric Reading Lamp, Taking Flashlights by Electricity, How to Make a Two-Step Night-Light Transformer, Make Your Own Christmas Tree, The Burglar Makes a False Step, Increasing the Voltage of a Dry-Battery, To Prevent the Ears from Perspiring When Using Telephones, The Sleeper Must Get Up to Stop the Alarm, An Electro-Thermostatic Control for House-Heating Boilers, An Electrically-Heated Inhaler for Respiratory Troubles, The Ordinary Buzzer Used for a Shocking Machine, Why Stay Awake to Call the Nurse, A Toy Electric Signal for Miniature Trains, How Short Circuits Occur on an Automobile, Why Use a Step-Ladder to Change Light Bulbs, How to Make All the Clocks Strike at Once, Drying Shoes with Heat from an Electric Globe, Twisted Picture-Cord Used for a Fan Motor Brush, The Electric Lamp As a Cooking Device, New Applications of Electricity, An Electrically Driven Gyroscope and How It Acts, Strong Wireless Signals in Winter Time, Electricity Direct from Coal, How Electric Signals Direct a Big Show, Connecting a Spotlight, in an Automobile Dynamo Circuit, Moving X-Ray Pictures, Describing the Electric Circuit by Comparing It to Hydraulic Circuit, An Effective Method for Recharging Dry Cells, A Silver-Plating Bath and How to Use It, How Electrolysis Destroys Water-Mains, The Effect of Electricity and Music on the Human Organism, Photographing Music on a Film, X-Raying the Oyster for Pearls, Testing Tips for the Electrician, A Soldering Iron Heater, A Speed Indicator Will Count the Turns for Your Coil, Paper Strips on Armature Amplify a Buzzer Tone, How to Test the Strength and Stability of Magnets, Charging Storage Cells from Service Mains, Railroad the Telephone in a Crowded Office, An Elaborate Electrical Plug-In Clock, much, much more...



5 1/2 x 8 1/2 softcover 427 pages
 No. 21494 \$12.95



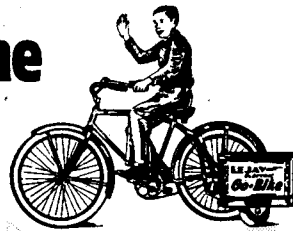
LEJAY MANUAL 1945 EDITION

by Lawrence D. Leach

reprinted by Lindsay Publications

In the 1930's the Lejay Mfg Co in Minneapolis began publishing a booklet describing unusual electrical projects. As new editions came out, new plans were added until by 1945 there were 50 separate "chapters".

The



Incredible 1945 Lejay Manual!

Most of the articles in this edition deal with the conversion with now-antique auto generators into 110 volt alternators, other voltage generators and motors. A lot of this info was used in areas of the country that hadn't been electrified. You could buy old generators from auto junk yards, build a windmill, repair old auto batteries, and use the electricity to run homebuilt motors, welders and so on.

Most of the information in this booklet is now of limited value simply because you can't get the generators listed. But the rewinding data, hints and tips provided can help you in other rewinding projects for other types of generators.

There ARE several projects in this booklet each of which is worth the entire price of the publication. For instance, you can build a small but useful spot welder powered by nothing more than a string of auto batteries. You get plans for an arc welder, a transformer spot welder, a carbon-arc torch, electric bicycle, a water wheel, a windmill and more. Each plan is well illustrated.

This is a manual worth having in your reference library. Great ideas. Great value. Fun to read. Useful projects. Worth having. Order a copy!

8 1/2 x 11 booklet 32 pages
 No. 20013 \$7.95

Just a few of the 50 UNUSUAL ELECTRICAL Projects & Plans

- 1 Plans for 110 Volt AC Light Plant made from Ford Model "T" Generator
- 3 A 6 Volt Slow Speed Generator (with plans for all-metal windmill)
- 4 6 Volt & 12 Volt Slow Speed Generators from Dodge "G" or "GA" Northeast Generator also from other Generators
- 5 A 32 volt slow speed wind light Plant Generator
- 7 How to Make a Grinder, Series Motor, Constant Speed Motor, A Universal AC or DC Motor and a Soldering Iron
- 8 A 75 to 110 Ampere Arc Welder Made from Dodge "G" or "GA" Generator. Also Dual Welders.
- 9 Pendulum Type Fence Controller made from Ford "T" Coil
- 10 Plans for Building a Complete Wind Light Plant Including Tower, Propeller and Generator Charger
- 11 A 110 Volt AC Light Plant Generator
- 12 A "B" Eliminator For Your Battery Operated Radio
- 13 An Automobile Generator Booster Control
- 18 Directions for Repairing Your Own Batteries
- 19 A Water Wheel Made from Old Automobile Wheel
- 20 An Electric Outboard Motor from Old Ford "T" Generator
- 21 A Gas Engine or Motor Driven Generator with Drawings in Detail
- 22 An Armature Growler for Testing Auto or Slow Speed Armatures
- 29 A 110 V. or 220 VAC Portable Transformer for Arc Welding
- 30 A 110 Volt Spot Welder — 1 Kw. Input Normal Draw 10 to 11 Amps
- 31 A Direct Drive 32 Volt Wind Plant — All Metal Construction
- 32 A Battery Spot Welder
- 43 Two Types 110 Volt AC Insect Exterminators
- 44 An Electric Scooter Using a 6 or 12 volt Battery for Power
- 45 An Electric "Go Bike" Using a 6 or 12 volt Battery for Power
- 46 A Carbon Electrode Holder for Soldering, Brazing and Light Welding Direct from Six-volt Storage Batteries
- 48 110 Volt AC 500 Watt Self Excited Generator from Dodge Model "G" or "GA" generator.
- 50 An AC Welding Transformer Using Dodge Generator Coils

Appendix: Windpower Information, Definitions, etc

Fifty-Five Wild Projects!

Jacob's Ladder • Plasma Sphere • Induction Coil • Van de Graaff generator • Tesla Coil • Kirlian Camera • Superconductor Disc • See-in-the-Dark Viewer • more!

GADGETEER'S GOLDMINE!

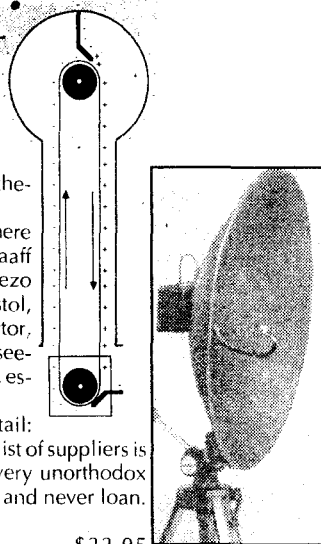
by Gordon McComb

Here, in a single book, are 55 off-the-wall devices you can build.

You get a Jacob's ladder, plasma sphere generator, induction coil, Van de Graaff generator, Tesla coil, Kirlian camera, piezo film speaker and amp; He-Ne laser pistol, variable-rate strobe light, radiation detector, universal receiver, superconductor disc, see-in-the-dark viewer, shape-memory alloy, espionage devices, robots, and more!

And this is good stuff! — plenty of detail: illustrations, diagrams, how-to text. The list of suppliers is quite impressive, too. This is a book every unorthodox experimenter should have in his library and never loan. Get one! 7 1/2 x 9 softcover 406 pages No. 383

\$22.95



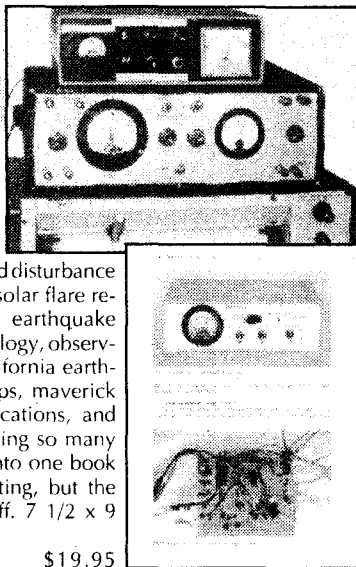
VERY UNUSUAL PLANS! WORTH HAVING!

HOW TO BUILD EARTHQUAKE, WEATHER, AND SOLAR FLARE MONITORS

by Gary G. Giusti

Build seismometers, magnetic field disturbance detectors, geiger counters, seismic-solar flare receivers, water seepage detectors, earthquake alarms and more. Read about seismology, observing atmospherics, the Southern California earthquakes of 1992, US seismicity maps, maverick observations, meteorological applications, and the Northridge earthquake. Cramming so many complex ideas and large projects into one book means a shotgun approach to writing, but the results are worth it. Interesting stuff. 7 1/2 x 9 softcover 290 pages No. 3043

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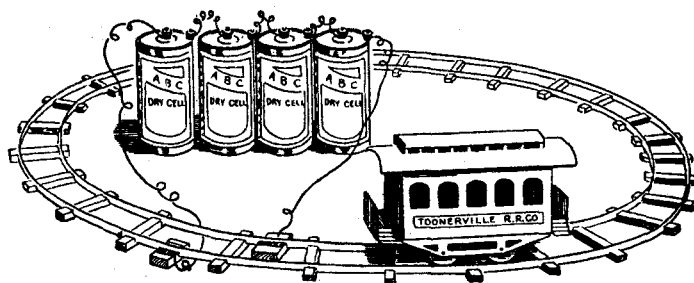
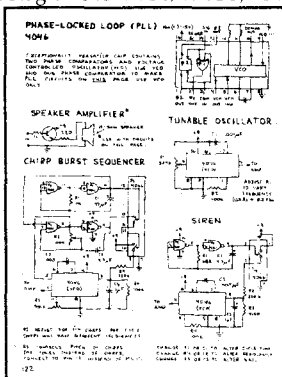


MIMS ENGINEER'S NOTEBOOK

by Forrest Mims III

Each page delivers from one to six circuit diagrams for MOS/CMOS, TTL, and linear integrated circuits. You get just about everything you can imagine from simple logic circuits to including digital stopwatch, LED dual flasher, stepped tone generator, BCD to 7-segment decoder, bargraph generator, adjustable negative power supply, 6 volt nicad charger, bridge amplifier, optical power meter, electronic bell, toy organ, solid-state oscilloscope, programmable four state tone generator, pulse-frequency-modulate infrared communicator, sound effects generator, 16 watt bridge amplifier, percussion synthesizer, analog delay line, and much, much more. IC's are dirt cheap anymore. Take a handful of 'em and this book and have some fun dreaming up circuits. More than 750,000 copies of this book have been sold over the years. 8 1/2 x 11 paperback 155 pages No. 389

\$19.95



The Boy Electrician

Classic 1940 Edition Available Again!

THE BOY ELECTRICIAN

by Alfred P. Morgan

reprinted by Lindsay Publications

If there could be only one book chosen as the boy's book of electricity, it would

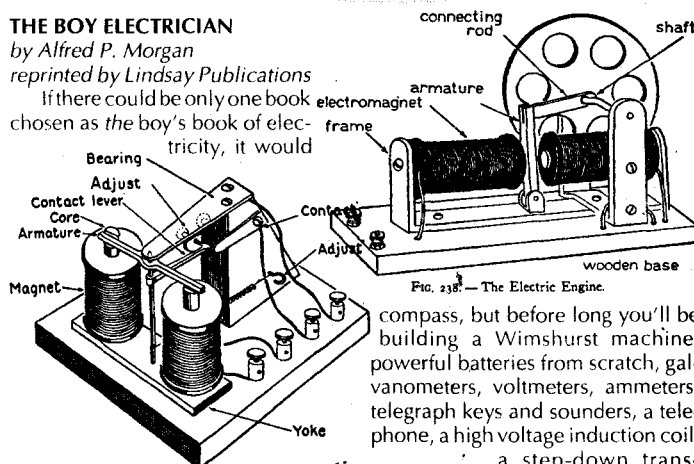


FIG. 238 — The Electric Engine.

have to be this one. The first edition appeared in 1913 and there were many to follow. This is the 1940 edition, and I know there were later editions.

Here, you get chapters entitled magnets and magnetism; static electricity; static electric machines; voltaic cells and batteries; electromagnetism and magnetic inductions; electrical units; wires and accessories; electrical measuring instruments; bells, burglar alarms and annunciators; telegraphy; microphones and telephones; inductions coils; transformers; wireless telegraphy; radio receiving sets; an experimental "wireless" telephone; electric motors; dynamos; an electric railway; miniature lighting; miscellaneous electrical apparatus.

You may remember having read "The Boy Electrician" when you were a kid. If not, you missed something. You get practical how-to plans and advice to build and have fun with all kinds of electrical equipment. You might start with a cork and needle

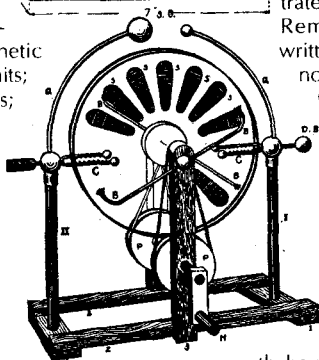
compass, but before long you'll be building a Wimshurst machine, powerful batteries from scratch, galvanometers, voltmeters, ammeters, telegraph keys and sounders, a telephone, a high voltage induction coil, a step-down transformer, wireless telegraphy with a crystal set receiver, vacuum tube receivers including a regenerative, motors and generators, an electric train, a device to convert heat directly into electricity and even a Tesla coil!

The whole book is heavily illustrated and a joy to read. Remember. This is written for boys. You're not going to get detailed design theory. Morgan keeps the discussion light and fun. But these are great projects.

You get a boy's classic book. Books like these aren't published anymore. This is

worth having. Lots of great experiments, ideas, and teasers to get the imagination going. So get off yer butt and get a copy of this. Start building. Even if you sit on the couch, suck a barrel of beer and eat a cubic yard of potato chips like I do anymore, you can still enjoy this. It's fun to read. Get a copy. 5 1/2 x 8 1/2 softcover 403 pages No. 21648

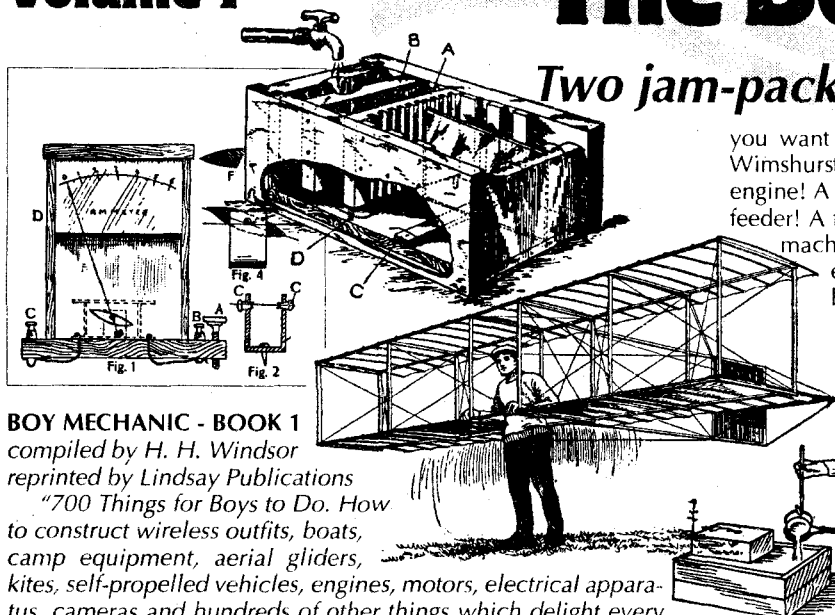
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Volume 1

The Boy Mechanic

Two jam-packed project books for boys!



BOY MECHANIC - BOOK 1

compiled by H. H. Windsor
reprinted by Lindsay Publications

"700 Things for Boys to Do. How to construct wireless outfits, boats, camp equipment, aerial gliders, kites, self-propelled vehicles, engines, motors, electrical apparatus, cameras and hundreds of other things which delight every boy."

You get wall-to-wall projects that in most cases are not too detailed, but are more than enough to whet the appetite and make

you want to get started. Build a Wright-brothers style glider! A Wimshurst machine! An arc light! An electric stove! A toy steam engine! A telegraph key! A water rheostat! An alarm clock chicken feeder! A fiat bottomed boat! An induction coil! A library table! A machine to put paraffin on wire! A pipe fitting steam engine! An electric postcard projector! An ammeter! A paper hot air balloon! A workbench!

You'll find information on imitation arms and armor, magic tricks of all kinds, chair carting, sundials, homemade phonographs, gymnasium equipment, an ice yacht, a pipe fitting lathe, a paper boat, a cross bow, an electric motor, glass blowing and much, much more.

Many people have asked us to reprint the Boy Mechanic. One look through it, and you'll see why. It's a combination of practical projects, not-so-practical projects, crazy ideas, and plain ol' fun nostalgia. 1913 edition. It's a classic book well worth your consideration. Order a copy today!

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Fig. 4—Pouring the Metal

Volume 2

BOY MECHANIC BOOK TWO

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"1000 things for Boys to Do. How to construct devices for winter sports, motion-picture camera, indoor games, reed furniture, electrical novelties, boats, fishing rods, camps and camp appliances, kites and gliders, pushmobiles, rollercoaster, ferris wheel and hundreds of other things which delight every boy with 995 illustrations."

Learn how to do plane-table surveying and make accurate maps. Once you've mastered that, you'll be shown how to do the same job from carefully taken photographs. Make a four-passenger bobsled, and ice glider, snowshoes, snowball thrower, paddlewheel boat, tandem monoplane glider, movie camera and projector, laboratory gas generator, soap box racer, oil burner for cook stove, combination lock for a drawer, magic tricks, electric score board,

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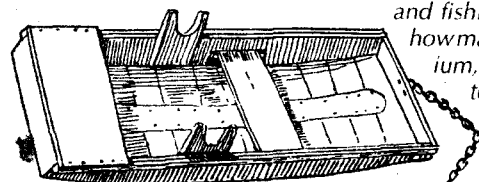
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by D. C. Beard

"If Huckleberry Finn were to settle down, somewhere out there in the territory, and decide to become an author, he might very well come up with a book like this one..." — Washington Post Book World

"The Handy Book was the perfect survival manual. It contained plans for 16 kinds of kites and hot-air balloons and fishing tackle. It told you



American Boys Handy Book! 1882 Classic!

how to make and stock an aquarium, to construct a water telescope and how to camp out without a tent. Or in a hut made from pine

boughs. How to build 10 kinds of boats, including a flatboat with a covered cabin. Ice boats, too. One-person canoes. Bird calls. Squirt guns with astonishing range and authority..." — Henry Kisor, Chicago Sun-Times

As a kid I read an original copy in our small town library. This is a classic book. Get a copy! 5 1/2 x 7 1/2 softcover 441 pages

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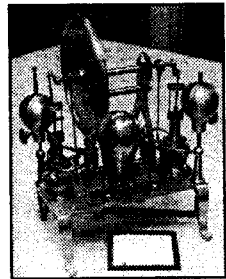
Perpetual Motion History

THE HISTORY OF AN OBSESSION

by A Ord-Hume

"Make a machine that gives out more work than the energy you put into it, and you have perpetual motion.... Here is a fascinating history... including sincere scientists,... charlatans and frauds who bilked the investing public; and a handful of machines that inexplicably appeared to work as endlessly as the interest in this inexhaustible subject..."

Chapters include elementary physics and perpetual motion, medieval pm, self-moving wheels and overbalancing weights, lodestones and electro-magnetism, capillary attraction and spongewheels, Cox's pm, the Redheffer pm, Keeley and his Amazing Motor; odd ideas about vaporization and liquefaction, the Garabed project, ever-ringing bells and radium pm; rolling ball clocks; perpetual lamps, and more.



You get pictures of great machines from Dr Schwiess 1790 ball-powered wheel and Chaper's 1870 sponge-wheel, to a photo of Redheffer's pm machine model in the Franklin Institute and Keeley's hydro-vacuo engine of 1872. Before you get your

hopes up, realize Keeley and many others were con-men. Keeley built a machine that turned tap water into "high-pressure etheric vapour when vibratory energy" was applied. After Keeley's death, investigators found the machine ran on compressed air as did his famous motor.

Great machines. Great eccentrics. Great reading. In print since 1977. Bargain book. Get one. 5 1/2 x 8 1/2 softcover 234 pages
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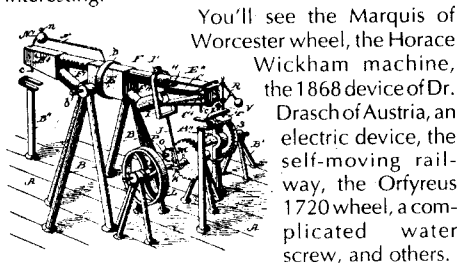
Perpetual Motion MECHANISMS

FIFTY PERPETUAL MOTION MECHANISMS

by Fred Dieterich

reprinted by Lindsay Publications

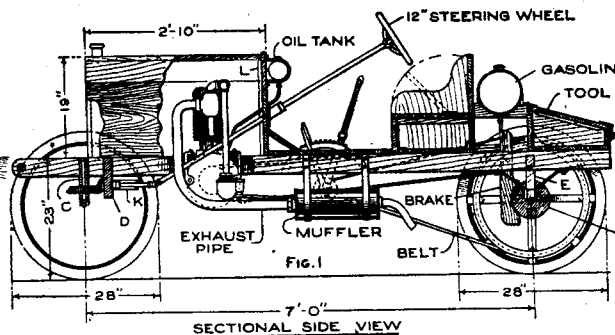
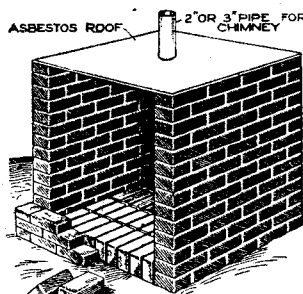
The author was a patent attorney who wrote a book in 1899 covering the process of securing a patent. One short section of his book covers perpetual motion inventions which are unpatentable. Dieterich, who was outraged by claims of perpetual motion, presents drawings of 50 different mechanisms. No doubt, you've already seen a number of these, but others are unique, and all are interesting.



You'll see the Marquis of Worcester wheel, the Horace Wickham machine, the 1868 device of Dr. Drasch of Austria, an electric device, the self-moving railway, the Orifreus 1720 wheel, a complicated water screw, and others.

Maybe you're trying to build a machine and want to avoid previous failures. Or you're a skeptic and want a good laugh. Whatever, the material is interesting and the price is low. Get a copy. You'll like it. 8 1/2 x 5 1/2 booklet 22 pages

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A Cooking Range Fashioned from
from Green 1 and 1/2 in a V-Shane with

BOY MECHANIC VOLUME 3

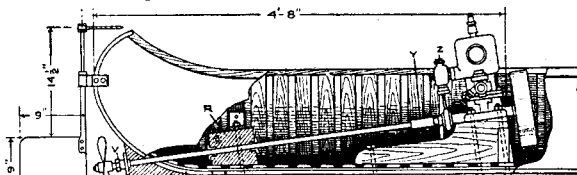
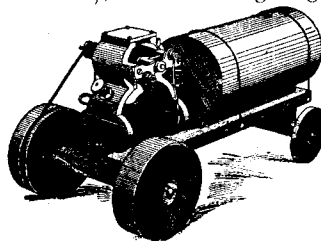
by H H Windsor

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Another volume of the fascinating *Boy Mechanic*! From 1919! Only 800 things for boys to do in this volume. Just 800...

This third volume seems to be somewhat more outdoors oriented than the first two volumes. You get ideas on building a coasting toboggan, sail driven ice boat, instructions on skiing, using a sporting rifle and shotgun, casting for game fish, on building a canoe, a house boat, a portable fishing boat, tricks of camping out and much more.

But you'll find great ideas on building a boy's homemade motor car, mission furniture, a searchlight, a dragon kite, a model mono-plane, a circular swing, a merry-go-round, a aerial cableway, a miniature fighting tank, a machine gun, a postcard projector, a small working



pile driver, homemade electric model train set, plans for a variety of photographic equipment, a miniature illuminating gas plant, a tuberculosis cottage ??!, a pigeon house, a hydraulic turbine, and much, much more.

If you have or have seen either of the first two volumes, you know what this is about. More of the same entertaining illustrated how-to stories.

You just gotta have one. So order one. Your copy is waiting. Just say the word. 5 1/2 x 8 1/2 softcover 476 pages

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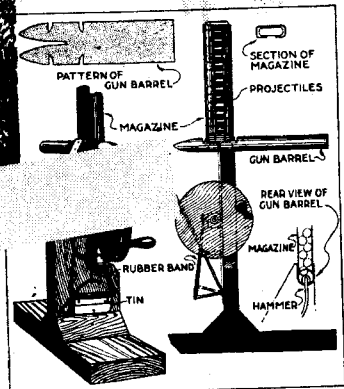
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CLOTH EDITION

A fraction of the press run has been case bound. Limited supply. Available on a first come, first served basis. May not be available for long periods of time, if ever again.

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The Machine Gun is Fired by Turning the Crank at the Wheel, the Pins on the Latter Drawing Back the Hammer, Which is Hooked Up with a Rubber Band



Neon Signs

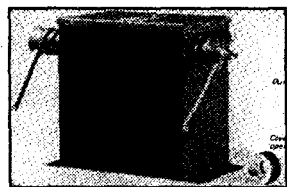
NEON SIGNS

by Miller & Fink

reprinted by Lindsay Publications

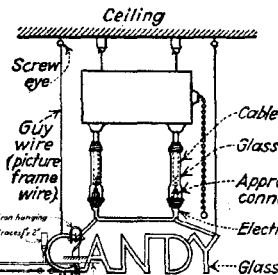
Sure. Equipment, techniques, and sign design have changed since this book first appeared in 1935, but not all that much.

Even if you're not interested in making neon signs, you'll find loads of useful information on rare gases, glass blowing, and vacuum systems that could be useful in experimental physics, high voltage, or even in building your own experimental vacuum tubes!



Chapters include the luminous tube, materials, electrical equipment, types of signs, designing the sign, glass bending, pumping systems, bombarding, filling, testing, aging, installation equipment, special applications, tricks of the trade and more!

Great How-To on Glass Blowing, Vacuum Systems, High Voltage and more from 1935!



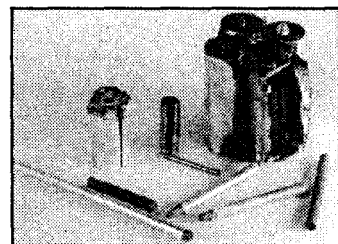
This is a quality straight-to-the-point book loaded with diagrams and photographs that you won't find just anywhere. It might be fun to make bizarre neon signs, repair "antique" signs, or just get into the trade. But even if that's not your goal, you'll find loads of unusual, interesting information. Consider this carefully. It certainly is NOT run of the mill. Order a copy. 5 1/2 x 8 1/2 softcover 288 pages No. 20340 \$12.95

SALVAGE CARBON RODS from dead batteries...

HOW TO SALVAGE CARBON RODS FROM BATTERIES FOR CARBON ARCS

by Don Meador

Stuck in the middle of a dead flashlight battery is a carbon rod. Pull it out, and put it to use. When two carbon rods which are connected to a source of electricity come together, they arc and slowly burn. They



give off enormous heat, blinding visible and ultraviolet light, and produce some really nasty toxic gases like ozone.

Carbon arcs are being phased out of

print shops where they have been used for years to provide the intense UV light needed to make offset plates. Carbon arc torches are very simple to build and can produce enormous heat. Carbon arcs can melt steel, yes, steel.

Meador has already written a booklet for building a carbon arc torch. Carbon rods are becoming hard to find. Here the author will show you how to extract carbon rods from used batteries, remove the chemicals, and insert it into a thin-wall brass tube to improve its operation.

The salvaged carbon rods are actually more graphite than pure carbon, so they have other applications as well. Meador is a graduate electrical engineer with a intense interest in metal working. It's quite possible in the future we'll see plans for carbon arc lights and a steel-melting furnace.

You must understand this is not a project you can take lightly. You're dealing with chemicals to salvage rods that can be quite dangerous if improperly used. But this is old technology used for decades. You can use it, too, if you are careful. Interesting.

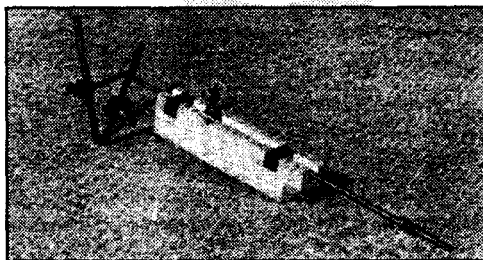
5 1/2 x 8 1/2 booklet 19 pages

No. 3029

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BUILD A CARBON ARC TORCH!

Generate 9000° Flame!



HOW TO BUILD A CARBON ARC TORCH

by Don A. Meador

Pump a large electrical current between a slightly separated pair of carbon electrodes and you come up a 9000° F flame useful for melting metal, welding and brazing. Here Meador will show you how to build a carbon arc torch using wood, tubing and commonly available carbon electrodes. You really don't need much money or expertise to build an excellent working torch.

You do need a source of high-amperage current such as an arc welder, but perhaps you could jury-rig another source such as a bank of auto batteries. (This could be dangerous, so be careful. You're on your own.) The maximum recommended amperage for a 3/16" electrode is 30 amps which is not much. On the other hand, 1/2" electrodes need up to 140 amps. But, then, what are you planning to do anyway? Braze two battleships together?

So build a torch. Use it to light up your movie lot, fry fish, or cauterize herpes lesions (although I don't think I want to be around to smell that!). You might even try using the torch to heat metal! Order a copy.

5 1/2 x 8 1/2 booklet 30 pages

No. 1349

\$6.95

Build a SOLAR CELL

HOW TO BUILD A SOLAR CELL THAT REALLY WORKS

by Walt Noon

Yes! You CAN build a solar cell that converts sunshine into electricity. And it's really quite easy.

Modern high efficiency solar cells based on silicon crystals are difficult and dangerous to manufacture. You would need exceptionally expensive equipment just to perform the most basic experiments. But fortunately there is another method.



Walt Noon will show you how to quickly and inexpensively build a copper oxide photo cell. Admittedly, its overall efficiency doesn't come close to modern silicon cells, but neither does the cost. You can crank out cells for pennies. Connect many cells in parallel and series, and you can generate surprising amounts of power.

The process requires only simple tools. The chemicals, like all chemicals, can be dangerous if mishandled, but the worst is probably nitric acid which is used to thoroughly clean the copper.

He'll show you to make a working cell, test it, troubleshoot it if necessary, and even give you ideas on an experimental painted cell that he's working on. In addition, he'll give you schematics of test circuits, sample applications, and interesting projects that he's tried. You'll also get names and addresses of suppliers.

That author is not a professional, but he has safely built and used these solar cells, and he's willing to show you how its done. You get a 24 page booklet with many drawings, schematics and photographs that describes the relatively simple process in detail.

Build solar cells! Perhaps you can make some improvement in the process that will improve efficiency. No matter what your objective, you'll find this to be a fascinating project worth trying. Rare information! Order a copy of this inexpensive booklet today.

5 1/2 x 8 1/2 booklet 22 pages

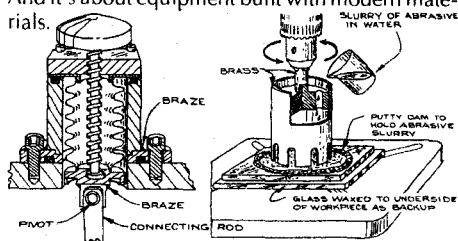
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BUILDING SCIENTIFIC APPARATUS

A Practical Guide to Design and Construction
by Moore, Davis, Coplan & Greer

The ultimate equipment book is Procedures in Experimental Physics offered elsewhere in this catalog. This book is the modern equivalent. I don't think this volume in any way surpasses Procedures but it is the closest thing I've seen yet. And it's about equipment built with modern materials.



BUILD SCIENTIFIC APPARATUS!

Chapters include: mechanical design, working with glass, vacuum techniques, optics, charged-particle optics, electronics, measurement and control of temperature. You also get references and a list of manufacturers and suppliers.

You'll learn about metals, alloys and their use in fabrication. You'll learn about bearings, working glass tubing, grinding and drilling glass, vacuum gauges, mechanical vacuum pumps, cryopumps, vacuum system design, cleaning optical components, features of laser design, spectrometers, Fabry-Perot interferometers, photovoltaic detectors, electron gun design, fringing-field correction, charged-particle detection, designing and building electronic equipment and much more.

You get great drawings, charts, diagrams, equations, and more. This is modern hi-tech stuff. IC's and transistors are fabricated from semiconductors, but semiconductors also produce light. You've heard of silicon, probably germanium and gallium arsenide. But how about cadmium telluride? It's available from Kodak under the name Irtan 6, and transmits out to 31 μ m! What do you need that for? I don't know. But neither will you unless you know this stuff is available. Then your imagination can dream up ingenious new uses.

You could be the first in your neighborhood to build a duoplasmatron ion source or a Mach-Zehnder interferometer. You could even put a bellows-sealed, wobble-drive, rotary-motion feedthrough on the mantle. Now wouldn't that raise the eyebrows of the roach exterminator next time he sprays your living room?

Knowledge of the contents of this book will push you beyond the level of the average machinist/handyman. And whether or not you use much of this material is not that important. The more you know, the more creative you can be because you have the raw material to synthesize new ideas. A smart mechanic will use this as an idea book if nothing else.

If you like to build unusual equipment, this belongs on your shelf next to Procedures in Experimental Science. Get a copy! 8 1/2 x 9 softcover 549 pages

No. 532

\$46.50

PROCEDURES IN EXPERIMENTAL PHYSICS

by John Strong

reprinted by Lindsay Publications

If you consider yourself an experimenter, an inventor, or a builder of unusual machines and equipment, you must have a copy of this fantastic classic text. No two ways about it.

You'll find wall-to-wall practical how-to and incredible illustrations on almost every one of the more than 600 pages. Chapters include: laboratory glass blowing, laboratory optical work, technique of high vacuum, coating of surfaces by evaporation and sputtering, the use of fused silica, electrometers and electroscopes, Geiger counters, vacuum thermopiles and the measurement of radiant energy, optics, photoelectric cells and amplifiers, photography in the lab, heat and high temperature, notes on the materials of research, notes on the construction and design of instruments and apparatus, and molding and casting.

This is some incredible stuff! Learn how to blow glass and make aspirators, distillation condensers, and so on. Learn how to seal copper to glass so that you can imbed electrodes. Learn how to rough cut lens blanks from large plates of glass and then grind them into lenses on your homebuilt lens grinder.

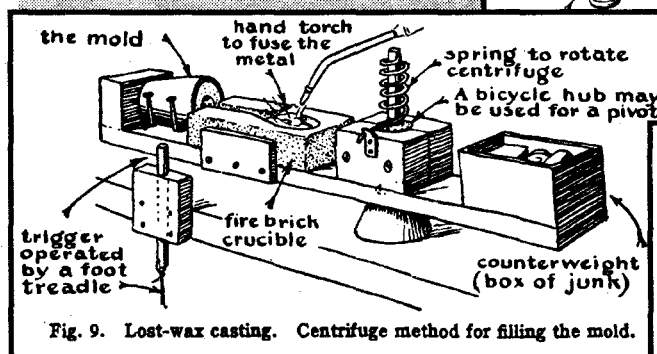


Fig. 9. Lost-wax casting. Centrifuge method for filling the mold.

Learn how to make a parabolic telescope mirror using the standard techniques. Learn to make unusual equipment to test the finished mirror. Learn how to grind a Schmidt lens.

Build high vacuum roughing pumps, getters for creating the highest vacuums, diffusion pumps using mercury and oil and much more. Silver mirrors, even with aluminum! Manipulate fused quartz strands to build a microbalance sensitive down to a billionth of a gram per division! And there's so much more!

Build a Compton adjustable quadrant electrometer, a Hoffman electrometer, and others useful for x-ray and cosmic ray work. Build a Geiger counter. You can build your own Geiger-Mueller tube if you master the high-vacuum technique taught earlier. Unfortunately, most of the electronics described is based on vacuum tubes of fifty years ago rather than on transistors.

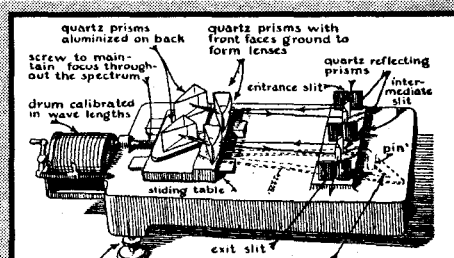
Build vacuum thermopiles that measure

Procedures in Experimental Physics

Wall-to-Wall How-to! Classic Text! Incredible Illustrations!

infrared, visible light and ultraviolet so accurately that they can be used to calibrate photographic lightmeters and such. You've heard of carbon arc lights, but do you know how to build iron arc lights? Or low pressure mercury arc lights? And others? You can even build a machine to measure the wavelength of colored light.

You'll find details on hydrogen furnaces, crucibles, burners, electric arc furnaces, and even a lab setup for making artificial rubies



This cam sliding on the pin rotates the rear prism table maintaining minimum deviation throughout the spectrum. All the slits are separately adjustable. The entrance and exit slits are curved to compensate for prismatic distortion.

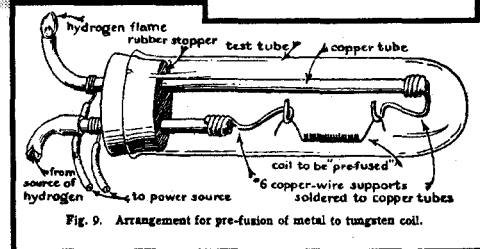
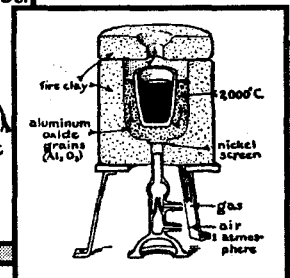


Fig. 9. Arrangement for pre-fusion of metal to tungsten coil.

and sapphires! And there's much more—even down to what we consider the "easy stuff" like using a lathe and sand casting.

This is a fantastic book loaded with construction secrets for unusual equipment that you should have. First published in 1938, this baby went through a couple of dozen printings! It's a classic. It's incredible. You should have a copy for reference if nothing else. Highly recommended. Order a copy today. 5 1/2 x 8 1/2 sewn softcover 642 pages

No. 4562

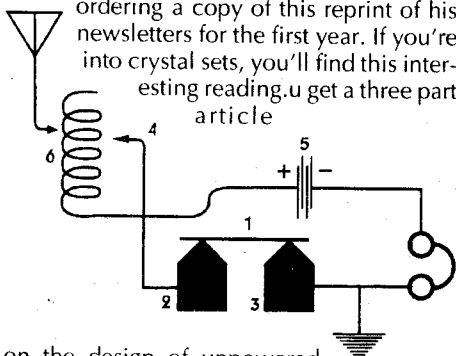
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XTAL Set Society!

XTAL SET SOCIETY NEWSLETTER VOL V
by Philip Anderson

In these reprints of the 1995 newsletters yoRadio can't get any simpler than crystal sets! Anyone can build one! But what do you do after you've wrapped an oatmeal box with wire? Here's your answer.

In July 1991 Phil Anderson from Lawrence, Kansas launched "The XTAL Set Society". You should have signed up. But you still can. And! You can find out what you missed by ordering a copy of this reprint of his newsletters for the first year. If you're into crystal sets, you'll find this interesting reading. u get a three part article



on the design of unpowered AM receivers made from rocks which includes plans for building test equipment such as an impedance meter and a Q meter. You also get radio outfit in a headset, Marconi Type 107-A Tuner, the matching secret, and a great ground-noise powered receiver. This interesting circuit extracts enough electrical power from two stakes driven into the ground to power a single transistor radio. (The free energy crowd will go nuts over this...). And there is much more. Same quality as the other volumes. Interesting. Get a copy. 5 1/2 x 8 1/2 softcover 88 pages

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5 1/2 x 8 1/2 booklet 86 pages

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You can join the XTAL Set Society and get six issues of the newsletter for \$9.95, \$11.00 US for Canadians, and \$16.00 US outside the U.S.

THE XTAL SET SOCIETY

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St Louis MO 63130

Tell 'em Lindsay sent ya...

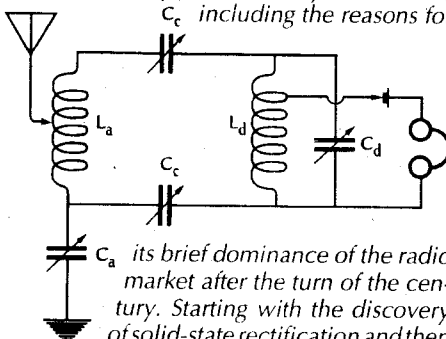
Basics of Crystal Radio!

CRYSTAL RADIO:

HISTORY FUNDAMENTALS, AND DESIGN

by P A Kinzie

"This book chronicles the fascinating history and development of the crystal detector, including the reasons for



its brief dominance of the radio market after the turn of the century. Starting with the discovery of solid-state rectification and then through the development of the crystal detector the reader learns about great inventors

such as Pickard, Braun, Dunwoody, and others. Radio fundamentals such as antennas, ground, lightning protection, tune circuits, and detection are covered for the beginner. The unending compromise between selectivity and sensitivity is discussed for the crystal set designer. Advanced topics such as the use of multituned circuits and wave traps follow for the more experienced experimenter..."

Another publication from the Xtal Set Society. And it's a good one. If you are now building crystal sets or intend to start, this is definitely worth having. For the rest of us experienced builders, the technical history and hints and tips are quite interesting. Nice book. I like it. I think you will, too. 5 1/2 x 8 1/2 softcover 119 pages

No. 3055

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RADIOS THAT WORK FOR FREE

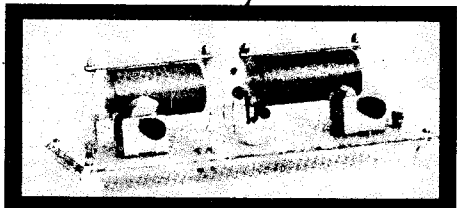
by K.E. Edwards

Build yourself a crystal set! You'll be shown everything you need to know - from materials to tools to techniques. Edwards will show you how to build "hot-rod" crystal sets with fancy features that can outperform the old oatmeal box versions, but are still simple. If you've never built anything electronic at any time but would like to try, this is a great place to start. This book has become a classic in its field, and it gives me a good feeling. I think you'll like it, too. 5 1/2 x 8 1/2 softcover 138 pages — well illustrated

No. 314

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Radios That Work For Free! Build a Crystal Set!



Old Crystal Sets!

CRYSTAL CLEAR

Vintage American Crystal Sets, Crystal Detectors, and Crystals

by Maurice L Sievers

If you haven't heard, radio collecting is hot. And some of the most desirable sets are crystal radios. This is an encyclopedia providing info on 573 vintage xtal sets, 341 xtal detectors, and 207 xtals. You get 750 illustrations including photos of the sets themselves, old ads, even photos from manufacturer's catalogs. You get tables of manufacturers, charts of sets, the years they were made, and on and on.

If you collect, you must have this. If you like to build replicas of old equipment or restore old sets, you'll find this fascinating as well. It's a big book, jam-packed with old xtal radios. Fun reading. Expensive but good. Consider it carefully. 8 1/2 x 11 paperback 282 pages

No. 3023

\$29.95



Shortwave Coils!

SHORTWAVE COIL DATA BOOK

by Radio Publications

Here in one jam-packed booklet from 1937 are

hints, tips, charts to help the shortwave radio builder design and build the best coils possible. You get informative articles from Gernsback magazines such as •Coil Data for TRF Receivers •The One Tube Oscillodyne Coils •The Mono-Coil •2 Winding Coils for 10-500 Meters •Coils for a 3 Tube Band Spreader •and many others

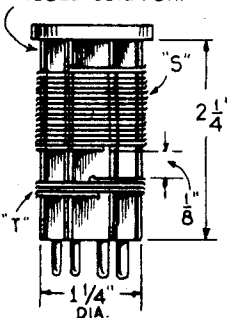
You also get nine different circuit diagrams for the "Most Popular SW Tuning Circuits" and five "Transmitting Circuits employing the coils described".

This is highly specialized information on just one important topic essential to successful radio construction. It's only 16 pages but it's quite inexpensive and delivers. Get a copy! 8 1/2 x 11 booklet 16 pages

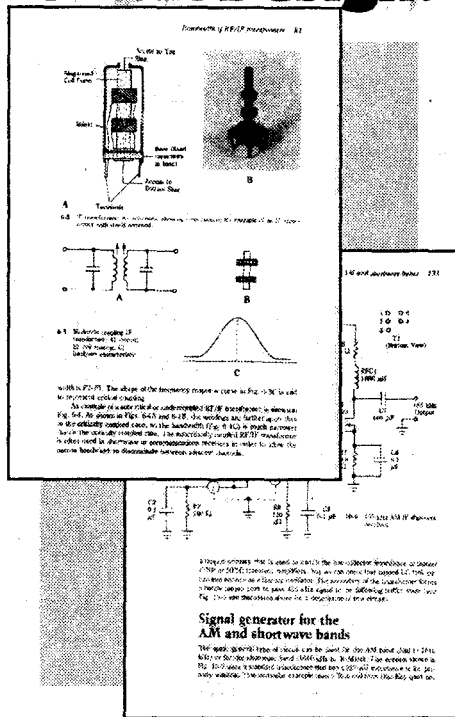
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\$3.00

RIBBED COIL FORM



Secrets of Rf Circuit Design!



SECRETS OF RF CIRCUIT DESIGN

by Joe Carr

Although this sounds like some engineering text, it's actually a great collection of circuit details, experiments, and practical theory regarding radio frequency circuits as opposed to audio or digital circuits. This is interesting reading once you've tired of the simpler stuff.

Chapters include: rf circuits and components, variable capacitors in RF circuits, winding your own coils, receiver theory and projects, tuned rf/lf transformers, rf amplifier and preselector circuits, rehabilitating old receivers and transmitters, rf circuit alignment techniques, building and refurbishing signal generators, radio reception and propagation, what's that mess coming from my receiver?, simple am and sw antennas, antenna construction, building and using the rf noise bridge, transmitters then and now, uhf and microwave antennas, ad hoc antennas for emergency use, impedance matching methods and circuits, microwave diodes, uhf and microwave rf transistors, uhf and microwave rfics, build your own time-domain reflectometer, solving frequency drift problems, building the poor man's spectrum analyzer, and more. Also included are seven computer programs in Basic for antenna design.

This is a great book for anyone in radio, whether you are a shortwave listener, ham, or radio collector, there is something here for you. You can build a simple receiver using the NE602 chip, or look at a spark transmitter that puts a Frankenstein movie to shame. Carr is an electrical engineer and a ham, knows both the theory and the practical, and has a sense of humor that comes through in his writing.

Good book. Consider it. And look at Carr's other books. They're just as good. Get a copy. 7 1/2 x 9 softcover 405 pages heavily illustrated
No. 3046

\$24.95

Shortwave Radio Manual

OFFICIAL 1934
SHORT WAVE RADIO MANUAL

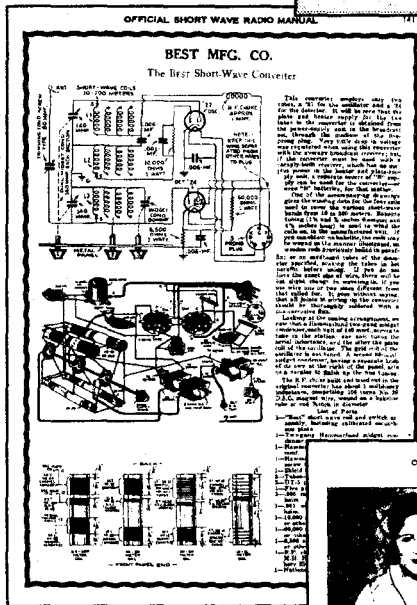
edited by Hugo Gernsback
& H W Secor

new chapter by T. J. Lindsay

Build simple, high-performance old timeA shortwaver radios! You can. All of the secrets are here: the circuit diagrams, parts layout, coil specifications, construction details, operation hints, and much more.

Back in the 20's and 30's the only low-cost way of listening in on the newly discovered and fascinating shortwave radio frequencies was to build a set. Shortwave construction magazines flourished, even during the depression.

This is a compilation of construction articles from "Short Wave Craft" magazine. It's wall-to-wall how-to.



SECRETS OF OLD SETS! At the rear of the book are circuit diagrams, photographs, and design secrets of all shortwave receivers being manufactured in 1934 including some of the most famous: SW-58, the SW-5 "Thrill Box", the deForest KR-1, the Hammurand "CometPro", and many more.

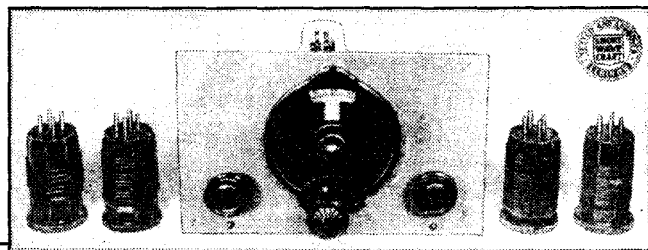
BUILD SOLID-STATE SETS!

You'll find that all the circuits use tubes since transistors hadn't yet been invented. And you'll also find that the original tubes listed are usually difficult to find today. Included is a new chapter showing how you can use transistors to replace hard-to-find vacuum tubes. You'll even see the circuit that was lashed together on a table top one night using junk box parts, one of my wife's hair curlers and alligator clips. When I hooked it up to an antenna strung

Incredible How-To! Reference!

And a special new chapter on solid-state sets!

across the basement ceiling and attached a 9 volt battery, signals started popping in like crazy. In a couple of minutes I heard an urgent message from a ship's captain off Seattle asking for a navigator to help him through shallow water. Not bad, considering I live near Chicago!

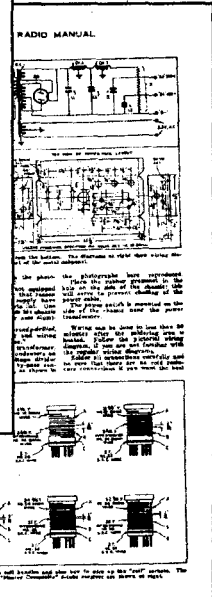


HOT PERFORMERS! These small regenerative receivers are extremely simple, but do they ever perform! I've built dozens of them, and they never fail to amaze me! Even master machinist, Dave Gingery has built these sets.

This is the nuts for the experimenter, the survivalist who is concerned about basic communication, shortwave listeners, ham radio operators who collect old receivers, and just about anyone interested in old-time radio.

Great book. Best old-time radio book I've ever seen. And I look at every one I can get my hands on. Consider it carefully. Even if you never build one of these radios, you'll get hours of enjoyable reading out of this book. Top rate. Order a copy. 8 1/2 x 11 softcover 260 pages
No. 4643

\$15.95



Learn Electronics! Great First Book!

UNDERSTANDING BASIC ELECTRONICS

by Larry Wolfgang

This is a gem from the ARRL. Learn electronics.

Fast and simply. This is one of the best basic texts I've ever seen.

Each topic is contained in its own unit, explained slowly and in detail, with great illustration. You start with the simplest concepts of magnetism and electric fields and investigate capacitors, inductors, resistors, Ohm's Law, Kirchhoff's law, resonant circuits, transistors, FET's, integrated circuits, vacuum tubes (what? are they still around?), and much more.

Sooner or later, you'll read in books

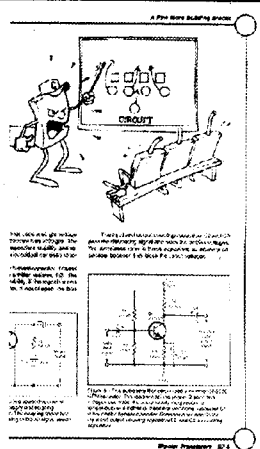
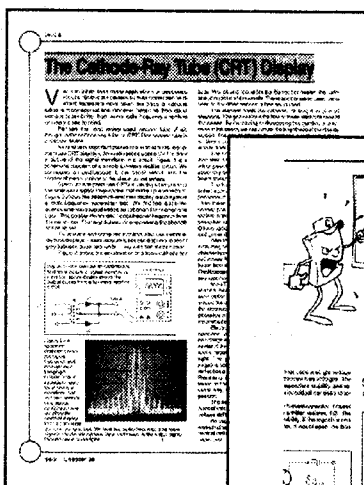
and magazines about needing high Q—even if you're only building a crystal set. Well, Q is explained as being the defined by the relationship

between the reactance and resistance. You can find the Q of a resonant circuit by measuring the 3 db, or half power points. What? It's all explained. You get sections on db, logarithms, trigonometry, reactance, and everything else. It's all explained. Everything. As simply as I've ever seen.

This is great, practical info on electronics. I think this is one of the best books the ARRL has cranked out. If you're just getting started in electronics, are an apprentice electrician, or just a nutcase like me, I think you'll appreciate this. A bit expensive, but certainly worth it.

8 1/2 x 11 softcover 314 pages well illustrated

No. 3052 \$20.00



First Steps in Radio!

FIRST STEPS IN RADIO

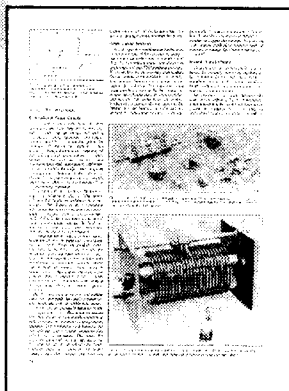
by Doug DeMaw W1FB

Learn about reading schematic diagrams, capacitors, coils, transformers, switches, receivers, transmitters and all kinds of things in a simple, easy-to-understand way. If you know what's in this small book, you're way ahead of 95% of the glueheads out there who do nothing but watch television.

You get a quick run-down on the hardware from diodes and transistors to coils and capacitors, antennas, and how it all fits together in the world of radio whether you are only interested in receiving, or are interested in getting a license to transmit as well. Simple. Easy to read and understand. Well illustrated. BARGAIN! Get one—8 1/2 x 11 booklet binding 86 pages

No. 3051

\$6.00



Receiving Antenna Handbook

RECEIVING ANTENNA HANDBOOK

by Joe Carr

You "ain't gonna hear nothing" from your million dollar shortwave receiver unless you give it signals from a top-rate antenna. Get hot! Build a good antenna.

Here's a great book that covers receiving antennas from basics to the unusual. It's well illustrated and easy-to-read, and will give you plenty of new ideas to try.

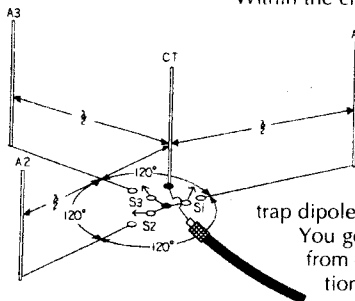
Chapters include preliminaries, real-world antennas, antenna and lightning protection grounds, transmission lines, some quick and dirty antennas, the dipole and its relatives, longwire antennas, other wire antennas, vertical antennas, directional antennas, small loop receiving antennas, low frequency antennas, and odds and ends.

Within the chapters you'll learn about stealth antennas for apartment dwellers, helically wound antennas, discones, counterpoise grounds for verticals, a ferriloop antenna, parasitic beams, the Thorne array, longwire termination resistors, steerable notch Beverage antennas, rhombics, trap dipoles and on and on.

You get loads of practical information from construction formulas and directional plots, to schematics for RF amps, electrical equivalent diagrams and construction details. The book is on the expensive side but delivers more useful receiving antenna information than I've seen in a single book in a long time. Order a copy. 8 1/2 x 11 softcover 189 pages

No. 399

\$19.95



222 Circuits!

Master 1923 Builder's Reference!

HENLEY'S 222 RADIO CIRCUIT DESIGNS

by Anderson, Mills, & Lewis

Every imaginable schematic from crystal sets to big multi-tube 1923 receivers and transmitters. A

master reference of early radio circuits for the collector and builder. Wall-to-wall schematics. Numerous radios you can

build. 5 1/2 x 8 1/2 softcover 271 pages

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\$11.95

VACUUM TUBES

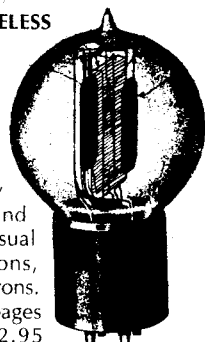
VACUUM TUBES IN WIRELESS COMMUNICATION

by Elmer Bucher

A 1919 handbook for the application of vacuum tubes! Over 140 circuits for Vacuum tubes as Detectors, Radio or Audio Frequency Amplifiers, Regenerative and Beat Receivers, and unusual equipment like Dynatrons, Pliodynatrons, and Kenotrons. 5 1/2 x 8 1/2 softcover 208 pages

No. 20412

\$12.95



Early TV & Fax!

VISION BY RADIO

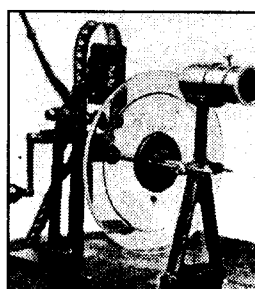
RADIO PHOTOGRAPHS RADIO PHOTOGRAMS

by C. Francis Jenkins

Rare, early book on fax machines and their ancestors: Nipkow & Sutton, the AT&T machines, fax in natural colors (!), primitive television and more!

5 1/2 x 8 1/2 softcover 140 pages

No. 20200 \$9.95



EARLY TV!

EXPERIMENTAL TELEVISION

by A. Frederick Collins

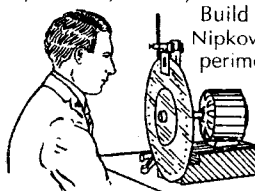
reprinted by Lindsay Publications

Build 1932 televisions using Nipkow scanning disks. Experiment with disks, photoelectric cells, oscillograph tubes, and build your own television transmitters and receivers. Very rare, and original copies are

very expensive. 5 1/2 x 8 1/2 paperback 313 pages

No. 20790

\$14.95



Call Early in the Day!

If you have to call us, call us early in the day. You may have a tough time reaching us after noon central time.

Wireless Experimenter's Manual

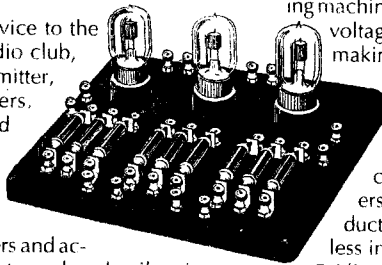
WIRELESS EXPERIMENTER'S MANUAL

by Elmer E. Bucher

reprinted by Lindsay Publications

Classic 1920 manual on how to build operate radio equipment!

You get chapters on advice to the amateur, formation of a radio club, principles of the radio transmitter, construction of transmitters, construction of aerials and masts, tuners and detectors, vacuum tube detector and amplifier, undamped wave transmitters, cabinet receivers and accessories, design of wavemeters, closed coil aerials, Weagant static eliminator, and long distance relays by radio.



You get everything from early spark gap transmitters to continuous wave transmitters and radio telephone transmitters. You get great construction how-to on winding power transformers, coil winding machines, oscillation transformers, high-voltage condensers, rotary spark gaps, making a key, building receivers with variometers, homemade crystal detectors and much more.

Great book! Fun reading. Incredibly good if you want to build crystal sets, Tesla coils, transformers, repair old radios, or build reproductions of antique equipment. Countless incredible drawings. Get a copy.

5 1/2 x 8 1/2 softcover 350 pages

No. 20854

\$13.95

12 SW Receiver Plans!

HAMMARLUND SHORT WAVE MANUAL - 3RD EDITION

reprinted by Lindsay Publications

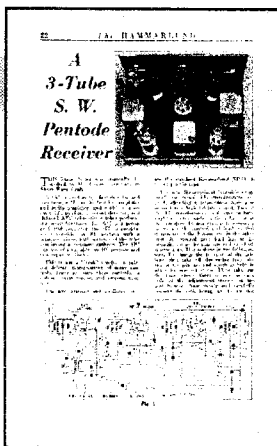
Build Depression-era radios with Hammarlund parts! You get plans, schematic, parts connection diagrams, tube pin layouts, photos, and lots more. I haven't seen any plans better done than these!

This is great stuff! Build the "AC-DC 2-Tube SW Receiver" using two double tubes, a 6F7 and a 12A7. The circuit is surprisingly simple, and yet I'm sure it performs very well! Or try the "Pentaflex". Or the "Ray Five Meter Set" - a three tube super-regenerative for 5 meters. Or one of nine other circuits!

Fun reading. Great source of construction ideas. The price is reasonable and the content is super. Order a copy today. You'll enjoy it. 5 1/2 x 8 1/2 booklet 32 pages

No. 4937

\$4.95



Great Radio Construction Manual from 1924!

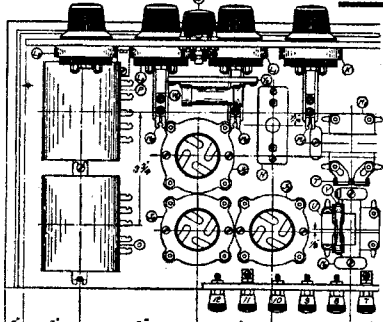
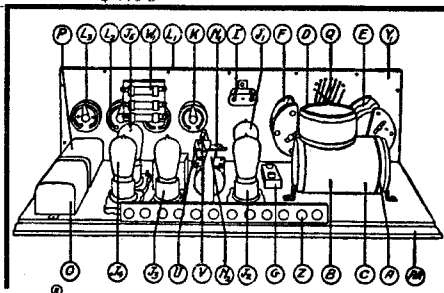
POPULAR RADIO HANDBOOK NO. 1 -

How to Build Your Radio Receiver

edited by Banning & Cockaday
reprinted by Lindsay Publications

From 1924. Reprint of construction articles from Popula Radio magazine.

Chapters include: how to read a radio diagram, how to put up an outdoor receiving antenna, how to build an efficient NBS crystal receiver, how to build the Haynes DX receiver, how to build a two-stage audio-frequency amplifier, how to build the four-circuit tuner, how to build a tuned radio-frequency receiver, how to build the improved four-circuit tuner, how to improve the three-tube four-circuit tuner, how

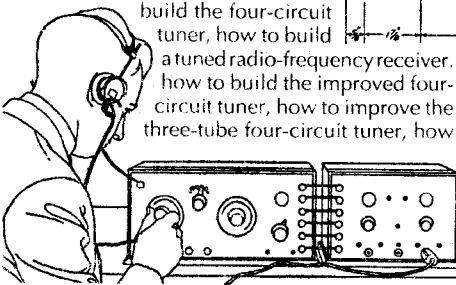


drilling layouts for the Bakelite panels, dimensions for the cabinets, wiring instructions and more. This is one of the best early practical how-to books I've seen

If you have radios to restore, or have old parts you'd love to lash up into a working set, then this is for you. For the rest of us it's fun reading. It's technological history! Early radio at its best. Get a copy. 8 1/2 x 11 softcover 104 pages

No. 20951

\$8.95



Meissner How-To Manual

"HOW TO BUILD" INSTRUCTION MANUAL

by Meissner Manufacturing Co.

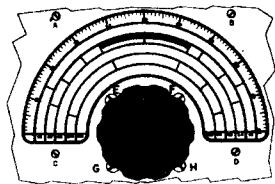
reprinted by Lindsay Publications

Radio construction book from 1943. Includes

complete outlines for building receivers and adapting units, an explanation of Frequency Modulation Theory, instructions and data for FM receivers and photo-recorders, and detailed pointers on coil design. Well illustrated with excellent diagrams. 8 1/2 x 11 softcover 168 pages

No. 20633

\$9.95



1922 Sears Radio Wishbook

ELECTRICAL GOODS & RADIO APPARATUS - 1922

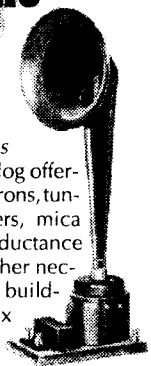
Sears, Roebuck and Co.

reprinted by Lindsay Publications

Great picture reference. Catalog offering audiotrons, condensers, radiotrons, tuning coils, oscillation transformers, mica condensers, rotary spark gaps, inductance coils, variocouplers and every other necessary component. For collectors, builders, and fanatics. Get one! 8 1/2 x 11 softcover 60 pages

No. 20994

\$7.95



Radio Apparatus!

THE HOW AND WHY OF RADIO APPARATUS

H. W. Secore, E. E.

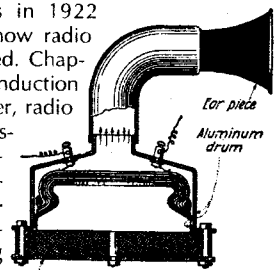
reprinted by Lindsay Publications

Radio builders in 1922 needed to know how radio components worked. Chapters include: the induction coil, the transformer, radio transmitting condensers, spark gaps, radio transmitting inductance radio receiving tuner, radio receiving condensers, detectors, telephone receivers, radio amplifiers, how to make and use a direct reading wave meter and decremeter, antenna construction, calculation and measurement of inductance.

Useful for radio builders, collectors, even Tesla coil builders. 6 x 9 softcover 160 pages

No. 21133

\$8.95



101 SW Circuits!

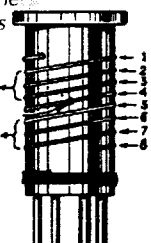
from Radio & Television Magazine

reprinted by Lindsay Publications

Reprints of magazine construction articles. Early 1930's. Wiring diagrams, schematics, parts lists. From a 1 tube regenerative, to they "Wyeth All-Wave Six". Heavily illustrated. Bargain. 7 1/4 x 9 1/2 softcover 72 pages

No. 20382

\$7.95



GERNSBACK'S EDUCATIONAL LIBRARY

GERNSBACK'S EDUCATIONAL LIBRARY
reprinted by Lindsay Publications

In the late 1930's Hugo Gernsback's Radio Publications company in New York published a series of ten shortwave radio booklets to satisfy the public's growing interest in building and operating shortwave sets.

Each booklet is 32 pages in length, is well illustrated, and has a brilliant yellow cover. Each covers a different topic from radio construction to electrical experiments to television.

You'll find these little booklets fascinating reading, full of ideas, and you'll find each to be a slice of early radio history back when radios were built on breadboards with handtools instead of printed circuits.

The original booklets were printed during the Great Depression on inferior quality paper and are now quite rare. But you can get high quality copies on quality paper and enjoy them again.

Order a set today!

NO. 1 HOW TO BUILD

4 DOERLE SHORTWAVE SETS

Build the 2-tube 12,500 mil "Doerle" shortwave receiver and the 3-tube signal gripper. You then get instructions on modifying these two basic radios into a bandspread receiver and an 110 VAC operated version.

No. 820 \$2.25

NO. 2 HOW TO MAKE MOST POPULAR ALL WAVE 1 AND 2 TUBE RECEIVERS

Build a Megadyne one-tube loudspeaker set, a beginner's 1 tube AC-DC set, a four-in-two all-wave all electric 2-tube set, a super-regenerative single-tube loudspeaker set, a portable 2-tube battery loudspeaker receiver, and a beginner's one-tube all-wave battery set.

No. 821 \$2.25

NO. 3 ALTERNATING CURRENT FOR BEGINNERS

Study theory, and perform home experiments with AC such as lighting a lamp induction, making a simple electric horn, watch demagnetizer, simple test for motor armature defects, bell-ringing transformer, charging storage batteries from an AC source, simple test for condensers, AC electromagnets, magnetic levitation, simple motors, lamp dimmer, and more.

No. 822 \$2.25

NO. 4 ALL ABOUT AERIALS

Part one covers receiving antennas with notes on tuned antennas, broadcast antennas, low impedance transmission line, doublets for shortwave, transposed leadin, a SW antenna tuner, antenna construction, a double-doublet all-wave antenna, doublet installations and more. Part II covers transmitting antennas for amateur stations including the half-wave antenna, output matching circuits, construction, the Zepp, a counterpoise system, and more.

No. 823 \$2.25

NO. 5 BEGINNERS' RADIO DICTIONARY

A complete 32 page dictionary for beginners. Obviously, most the terms are still in use, but some are not. Brief definitions and a number of illustrations are provided. Learn about acceptors, counterpoise, ferromagnetic modu-

lation, interrupter, keying flicker, strays, water rheostat and much more.

No. 824 \$2.25

NO. 6 HOW TO HAVE FUN WITH RADIO

Unusual experiments! Try the "Talking Newspaper" which is nothing more than a loudspeaker made from aluminum foil and newspapers! Also try talking gloves, radio electric chair (put a frying pan in your pants), visual music, dancing to silent music, musical and talking gadgets, the radio dancer, home broadcasting, the door that talked, and more!

No. 825 \$2.25

NO. 7 HOW TO READ RADIO DIAGRAMS

Learn how to translate radio diagrams into physical equipment. You get pictures, definitions, and equivalent symbols of radio components. Then you'll see circuit diagrams for a variety of circuits from crystal sets to multi-tube radios as well as the physical layout they represent. Basic information, but essential to radio newcomers in 1938.

No. 826 \$2.25

NO. 8 RADIO FOR BEGINNERS

Learn about wave analogies, principles of transmitting, and receiving principles. A lengthy section on receiving instruments will show you how tank circuits tune to particular wavelengths and how tubes and other components perform their jobs. You also get a section on antennas and aerials. Another essential booklet for the beginner.

No. 827 \$2.25

NO. 9 SIMPLE ELECTRICAL EXPERIMENTS

Build a galvanometer, experimental magnet, simple motor, electric shoker, microphone, arc lamp, electric furnace, arc welder, a home-made key, batteryless flashlight and more. Perform tricks with telephone receivers and experiments with lamps, neon lamps, condensers, talking condensers, static electricity, and more. You'll find a brief section on making a magnet, on rheostats and how to use them, rectifiers, simple measuring instruments, heat or cold from junction of dissimilar metals, handy wire gauge, musical instruments, and more.

No. 828 \$2.25

NO. 10 TELEVISION

In 1938 this was high-tech electronics! You get a primer of television, including details on mirror scanning, Scophony system, and movies for television. Study the kinescope or cathode ray tube and how the sweeping beam is synchronized. Learn about receiver antennas, how TV programs are broadcast, network TV, and even a Scophony system for color television! Quite interesting.

No. 829 \$2.25

PACKAGE NUMBERS 1 THROUGH 5

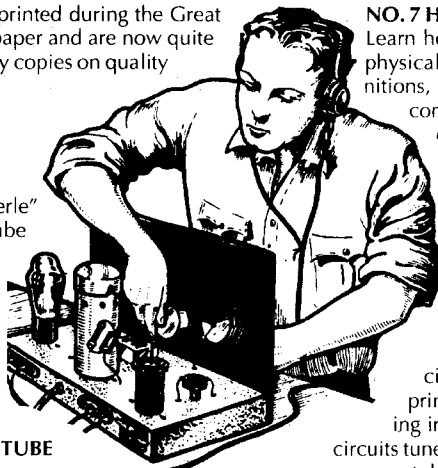
Get all five for one lower price. Save \$1.30

No. 930 \$9.95

PACKAGE NUMBERS 6 THROUGH 10

Get all five for one low price. Save \$1.30.

No. 931 \$9.95



SENSOR & SECURITY COOKBOOK

THE ALARM, SENSOR & SECURITY CIRCUIT COOKBOOK

by Thomas Petruzzellis

You can build your own sensor devices with these proven circuits. You can build pressure sensors, vibration and heat sensors, smoke and toxic gas detectors, tachometers, door and window alarms, motion detectors and much more.

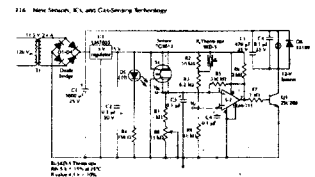


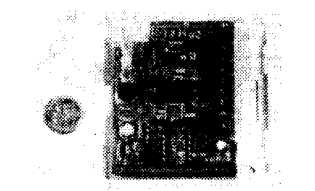
Fig. 3-22 Infrared gas leak detector

Table 3-2 Infrared conditions—TC-807 sensor

Temperature	Humidity	Circuit	Circuit
°C	%	with temperature compensation	without temperature compensation
20	55	3800	1000
-11	55	2600	1000
5	85	3100	4800
40	85	2800	1400

Calculating the detection circuit is accomplished by adjusting the 10 potentiometer at 20°C temperature, with a relative humidity of 55%. The V_o voltage should read 3.8 V at 20°C, in a 3000ppm concentration of methane. When installing the TC-807 sensor, two sensors should be observed. Never place the sensor in a drafty or windy location, and never place the sensor near a transformer. Including the TC-807 sensor, the TC-807 series detectors are available in two classifications—methane or propane. The methane sensor is used for gas and gas and the propane model is used for propane, butane, and LPG gases. A small colored dot on the sensor's body denotes the

Fig. 3-23 Infrared gas leak detector



The light beam detector can be implemented in two ways. In one method, a light beam is reflected off a mirror and onto the sensor. In the other method, the sensor is placed in a line of sight with the light source. The sensor is a small, rectangular device that is mounted on a printed circuit board. The sensor is connected to a circuit that controls the light beam. The sensor is used to detect the presence of a gas leak. The sensor is a small, rectangular device that is mounted on a printed circuit board. The sensor is connected to a circuit that controls the light beam. The sensor is used to detect the presence of a gas leak.

Chapters include sensors and detection circuits, new film sensor technology, new sensors and gas-sensing technology, computer interfacing, describing and surveying alarm systems, alarm system design philosophy, alarm circuits and system, unique high-tech security projects, and a list of suppliers.

What you need to do is bury a tuned metal detector in your driveway so that it can trigger an adjustable rate siren when your mother-in-law drives up! You can build it all. Lots of circuits to try and use. Interesting nuts-and-bolts book. Great ideas. 7 1/2 x 9 softcover 286 pages

No. 3060 \$19.95

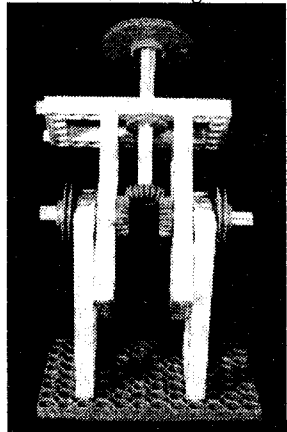
Mechanical Devices

for the Electronics Experimenter

MECHANICAL DEVICES
FOR THE ELECTRONICS EXPERIMENTER
by Britt Rorabaugh

One hot field of experimentation right now is robotics. Tinkerers are building surprisingly sophisticated mechanisms controlled by electronics. Trouble is mechanics buffs usually know little electronics. Electronics and computer buffs often don't know the first thing about mechanics. This book bridges the gap.

What you learn about here are how to convert electrical control signals into motion using hydraulics, pneumatics, cams, solenoids, gear trains, vacuum actuators, and more.



You'll learn about stepper motors, variable reluctance motors, control circuitry, homemade solenoids, friction drives, belt drives, bearings, ratchets, helical extension springs, vacuum pumps, pressure

reservoirs, hydraulic cylinders and pumps, wheeled vehicles and a whole lot more.

Naw, this ain't gonna help you repair your backhoe. This is for the guy who wants to build himself a machine to go to the fridge and get him a beer, or open the door when the dog (or your mother-in-law) needs to go out. Great book for experimenters, inventors and tinkerers. Get one. You'll learn something valuable. 7 1/2 x 9 softcover 237 pages

No. 3057

\$18.95

100 Early Circuits!

100 RADIO HOOK-UPS

by Maurice L. Muhleman
reprinted by Lindsay Publications

This immensely popular 1920's booklet contains over 100 different circuit diagrams and details for (among others) triode vacuum tubes, honeycomb coils, variometers, crystal sets, plain vacuum tube sets, the famous Reinartz, the improved Reinartz, Neutrodyne, super-heterodyne, and several miscellaneous sets. An idea book for radio-builders looking for something different. Small, inexpensive, and worth having! 5 x 7 softcover 48 pages

No. 20641

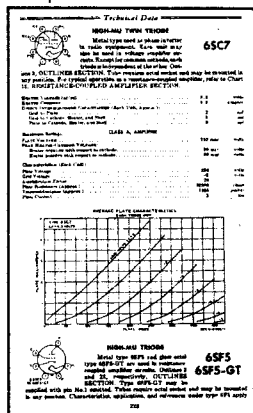
\$3.95



RCA RECEIVING TUBE MANUAL RC-19

by Radio Corporation of America

You say you found a 6AW8 in an old TV? Could you build a radio out of it? On page 139 of this reprint of the 1959 RCA tube manual, you'll find that it's a triode and a pentode in one glass envelope. Wow! There's your pentode regenerative detector and a high-mu audio amp to follow. It's a complete radio in one tube!



Under this and most listings you get maximum operating values, pin diagrams, typical operating values, details on input capacitances, amplification factor (mu), transconductance, characteristic curves and much more. In other words, this is an essential guide to recycling most of the receiving vacuum

RCA Vacuum Tube Manual

tubes available in the 50's and 60's and on back.

You get brief tube theory up front, followed by the main body of tube specs, and then details on testing, design, sample circuits and more. You get some of this data in the back of old Radio Amateur Handbooks, but not anymore. No tubes in the modern editions. You even get brief descriptions with pin diagrams for very old tubes like the 5 prong No. 15 — a sharp cutoff pentode, or the 4 prong 2A3 power triode. All kinds of tubes: 7 pin, 8, 9, even 12.

Trying to build or repair tube gear without a tube reference is difficult. This is a classic — an edition that covers more tubes of different types than just about any other I've run into. Get a copy for your reference library. A classic. 5 1/2 x 8 1/2 softcover 384 pages

No. 3054

\$12.95

JOIN THE NAVY! Learn Electronics!

BASIC ELECTRONICS

by Bureau of Naval Personnel

Here 'tis. The 1971 manual used to teach swabs that there is much more to life than chipping paint and catching unmentionable diseases. What could there be? Right. Electronics.

Here you get almost 600 pages of electronic textbook that will teach you about radio. Chapters include: basic test equipment, pn junction power supplies, transistors, electron tubes, electronic voltage regulators and meters, fundamentals of

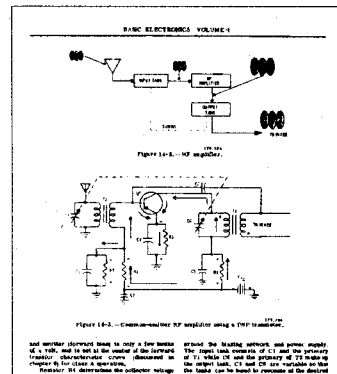


Figure 1-1. - Common-cathode RF amplifier using a 65C7 tube.

last section (directed beam) is only a few weeks old. It's a tube, and it's not in the manual of the Bureau of Naval Personnel. It's a tube, and it's not in the manual of the Bureau of Naval Personnel. It's a tube, and it's not in the manual of the Bureau of Naval Personnel.

Chapter 10 - - - - -

Chapter 11 - - - - -

Chapter 12 - - - - -

Chapter 13 - - - - -

Chapter 14 - - - - -

Chapter 15 - - - - -

Chapter 16 - - - - -

Chapter 17 - - - - -

Chapter 18 - - - - -

Chapter 19 - - - - -

communication theory, tuned circuits, intro to receivers, detectors, audio amplifiers, rf amplifiers, oscillators, mixers and converters, intermediate frequency amplifiers, receiver control circuits, receiver alignment, introduction to transmitters, rf power amplifiers, amplitude modulation, frequency modulation, receiver and transmitter troubleshooting, single sidband, cw and fm reception, six-step troubleshooting, transmission lines, wave propagation and antennas, and a number of appendices.

This is typical Navy training material: well-illustrated, simply written, straight-to-the-point. The Navy doesn't electrical engineers. It wants somebody who can fix the poontangoscope when it goes on the fritz. This is the info needed to get results.

A big manual at a very low price (by today's standards.) If you're just starting out in electronics, this is a good place to start. Lots of solid basic info at a great price. Get one. 6x9 paperback 566 pages

No. 310

\$12.95

Shortwave Handbook!

SHORT-WAVE HANDBOOK

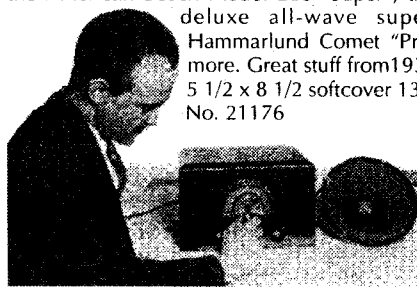
edited by Cockaday & Holze
reprinted by Lindsay Publications

From Radio News Magazine. Instructions for building five simple short wave receivers, two advanced short wave designs, maximizing short-wave usage, short wave stations lists, and more basics. Later chapters focus on the intricacies of the Lincoln R-9 receiver, the American Bosch Model 260 "Super", the Scott deluxe all-wave super, the Hammarlund Comet "Pro," and more. Great stuff from 1933.

5 1/2 x 8 1/2 softcover 136 pages

No. 21176

\$9.95



DeMaw's Design Notebook

Wall-to-wall Nuts & Bolts How-to for Radio Builders and Electronics Experimenters

W1FB'S DESIGN NOTEBOOK - Practical Circuits for Experimenters
by Doug DeMaw, W1FB

Doug DeMaw is a guy who knows both theory and practical application. He builds fun radio projects: receivers, transmitters, transceivers, matching networks, test gear and more.

Here you get his intro to solid state circuits starting with biasing transistors, building audio amps of various types, oscillators of exceptional stability, RF power amps, crystal filters and on and on.

Chapters include: diodes, ICs and transistors; transistor applications; diode and IC applications; construction practices; practical receivers and techniques; transmitter design and practice; index and appendix. Build a simple superhet receiver, an HF band down converter, a one-transistor shortwave transmitter (license required), a 15 watt 2 meter transmitter and much more.

You get page after page of schematics, charts and diagrams and down-to-earth practical electronics. If nothing else, get a copy and build some transistor amplifiers and oscillators. You'll even find a regenerative receiver and an equally simple direct conversion receiver that begs to be built.

All meat, direct-to-the-point how-to. Good stuff. No digital. All analog. And slanted to amateur radio. DeMaw has always been someone whose work I've admired. You will, too. Get a copy. 8 1/2 x 11 softcover 195 pages
No. 3033 \$10.00

Solid State Design!

SOLID STATE DESIGN FOR
THE RADIO AMATEUR
by Hayward and DeMaw

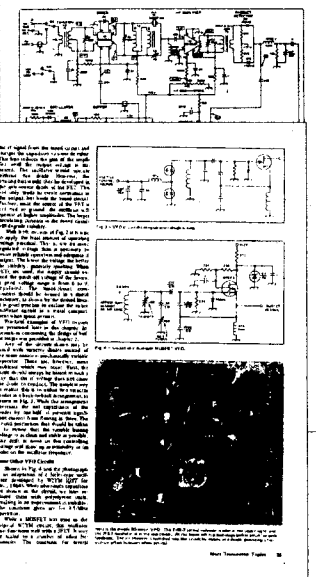
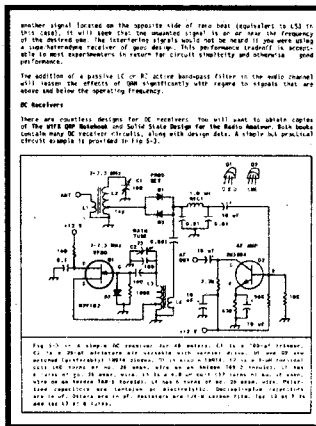
If you want to build radios with transistors, get this. True, it's aimed at the radio amateur who wants to radiate a signal as well as receive, but if you learn half of the knowledge taught here, you'll be the neighborhood electronics wizard.

Chapter include: semiconductors and the amateur; basics of transmitter design; more transmitter topics; power amplifiers and matching networks; receiver design basics; advanced receiver concepts; test equipment and accessories; modulation methods; field operation, portable gear and integrated stations; appendix and bibliography.

Start by building a VFO, variable frequency oscillator. It must be stable whether you use it to drive a transmitter or tune a receiver. Just building one will be an educational process. Build the transmitter. Build the receiver. Nuts! Build the whole station in a metal box that fits in the palm of your hand! You can do that and talk to someone a thousand miles away.

If you're just a receiver nut, not only will you get the basics of receiver design, but you'll get into design of modern receivers which need high dynamic range, something a regenerative receiver does not have. You can build a receiver that can rival just about anything you can buy.

I have "stolen" various circuits to include in my own experiments. They work, and they work beautifully. You can do the same. This is rightfully regarded as a classic, and something you should have in your reference library. A must have for the experimenter. Revised 1986 edition. Get a copy. 8 1/2 x 11 softcover 256 pages
No. 3035 \$15.00



RADIO AMATEUR'S HANDBOOK

THE ARRL HANDBOOK
For Radio Amateurs

by Amateur Radio Relay League

This is the master radio reference for amateur radio operators. It has been in printed at least as far back as the 1920's. And it covers everything. If you've ever seen any edition of the Handbook, you know what this is about. If you haven't, I'm not sure I can describe how valuable it is. It's 8 1/2 x 11, about two inches thick, and weighs over five pounds!

It covers everything: what is amateur radio; activities; modes; math for amateur radio; DC theory and resistive components; AC theory and reactive components; digital signal theory; analog signal theory; safety practices; real-world component characteristics; power supplies and projects; modulation sources; RF power amplifiers and projects; AC/RF sources (oscillators and synthesizers); mixers, modulators and demodulators; filters and projects; receivers, transmitters, transceivers and projects; digital signal processing; transmission lines; antennas and projects; propagation; station setup and accessory projects; repeaters, satellites, EME and DFing; component data; circuit construction; test procedures and projects; troubleshooting and repair; electromagnetic interference; regulations and references.

It covers everything from the theory to the practical. How to bias a transistor and etch a printed circuit board... How to build antennas and regulated power supplies... How to build a helical resonator and a regenerative receiver... How to use radio to link your computer to others and

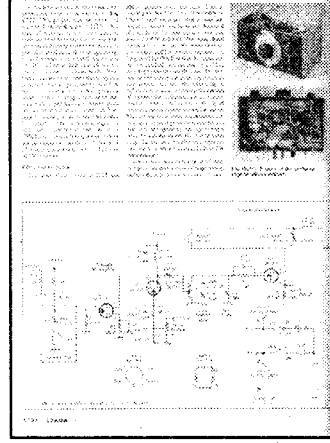
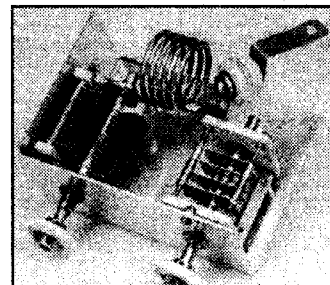
Incredible Reference!

receive "teletype" from around the world... How to get in on TV, slow-scan, satellite transponders, earth-moon-earth communication, spread spectrum, microwave and much more.

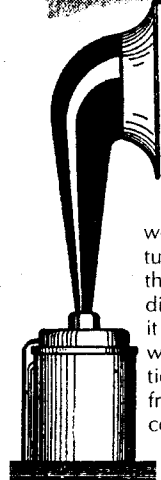
You'll find data on solar cells, battery chargers, superhet receivers of all types, microphones, SWR bridges, noise bridges, DIP meters, component specifications, addresses of suppliers, and much, much more. You get page after page of schematics, formulas, charts, photographs, and printed circuit layouts. You get wall-to-wall practical info on every aspect of electronics. (This is the first book you reach for when you have a question.) And you get a floppy disk containing MS-DOS programs for designing dipoles, pi networks, solenoidal coils, active filters, and a slow-scan TV conversion program.

Full tilt. It hasn't been in the catalog for some time

because it's a pain in the butt to pack and expensive to ship. And we don't get much of a wholesale discount for all our efforts. (That's why my price is \$1.50 more than the list price.) But it's really too good not to offer, at least part of the time. A master reference for everyone, not just amateurs. Get a copy. You won't regret it. (I have fifteen different editions back to '27! You never throw them away...) Order a copy, and make us hurt our back. 8 1/2 x 11 softcover (unorthodox page numbering system—maybe 600 or 700 pages?? You guess.) 1 3/4" thick just over five pounds (a monster)
No. 35 \$39.50



Build an Ancient Loudspeaker!



LOUD TALKERS – HOW TO BUILD THEM

by H. Winfield Secor
reprinted by
Lindsay Publications

You probably wouldn't have been able to afford a loud talker (loud speaker) back in '23. You would have had to build one. Actually this is a book about winding the electromagnet that vibrates a diaphragm violently enough to hear it across the room when amplified with an old-fashioned horn. Sections are entitled loud-talker field frame, the diaphragm and moving coil, data on loud-talkers actually built, details of step-down transformer, connection to vacuum-tube amplifier set, power amplifier circuit, bi-polar loud talker made from odd parts, building the electromagnet, and more. Unfortunately, there is nothing of significance on the horn.

It's just a little booklet. The original is brittle and yellow, having been printed on the cheapest paper. It's interesting. Rarely will you find anything on speakers. Worth adding to your radio collection. Order a copy! 5x7 booklet 48 pages
No. 20803

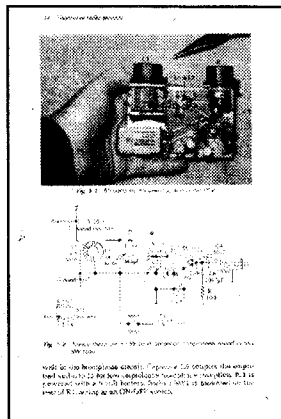
\$3.50

Build Radios!

RADIO RECEIVER PROJECTS YOU CAN BUILD by Homer I. Davidson

Great construction book! Great nuts-and-bolts! You get schematics, face plate layouts, parts lists, adjustment instructions and everything you need to build working radios.

You get instructions on six different crystal sets, five am radio sets, four regenerative sets, six short-wave sets (one vacuum tube), five special sets including solar cells and varactors, and a number of unusual projects including an antique tube shortwave receiver. The author will show you how to make your own dial decals, dial pointer, and reduction gear pointer.



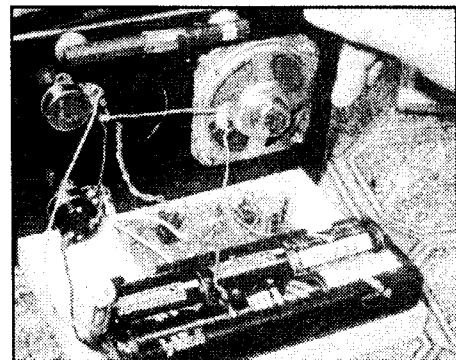
These are simple radios, great for most experimenters, yet they will pull signals incredibly well. I know, because I've already built some of these circuits in the past. In an age when people are afraid to program their VCR (or even set the clock for that

matter), those same people will be blown away when you pull one of your homebuilt sets off the shelf and explain you were listening to news from Radio Taiwan last night. They won't have a clue as to how you knew how to build it.

The only problem I have with this is that there is very little theory. Davidson will tell you to wind 50 turns on a 1 1/2" coil form. But what happens if your coil diameter is only 1 1/4"? What adjustments do you make? Understanding the theory allows you to make adjustments on the fly and use the components you may have on hand. You can get that theory from other books in this catalog.

This book shines in the "nuts & bolts" category. First rate how-to. Well illustrated. Get a copy and get building. 7 1/2 x 9 softcover 312 pages
No. 3049

\$19.95

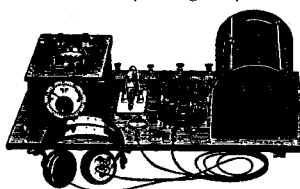


Rare Parts Catalog!

1914 CATALOG ELECTRO IMPORTING CO

reprinted by Lindsay Publications

Discover the amazing world of radio as it existed in 1914 when you explore this edition of the Electro-Importing Co parts catalog. You'll find



illustrations, text, even practical how-to tips on everything imaginable: electrolytic interrupter, kick-back preventer,

precision coherer, polarized relay, vario selective coupler, "Interstate" wireless receiving outfit, "Telimco" wireless telegraph outfit no. 4, the Omnigraph No. 2777, "Bull-Dog" spark coil, fancy Geissler tubes, the experimental X-Ray outfit, X-ray tubes, electroplating outfit, Tesla transformer, and much, much more.

You get a small, well-illustrated, jam-packed catalog that features unusual equipment that is no longer manufactured and no longer used. Fun reading. Great reference for the collector, restorer, and builder. Heavily illustrated! Get a copy. 4 1/2 x 6 1/2 softcover 144 pages
No. 20587

\$7.95

1936 Radio Data

1936 RADIO DATA BOOK

by Radio News Magazine

reprinted by Lindsay Publications

Get the latest radio news by studying the best articles from the 1935 issues of *Radio News* and *Shortwave Radio Magazine*.

Learn about the latest developments in television: disk scanning versus cathode ray systems. Discover the brand new metal octal-base



tubes and the receivers that use them such as the Atwater Kent 649, the GE A-82, and the Super

Skyrider. Study plans for shortwave radios: a single tube all-wave set, a 3-band set, and 9-tube amateur receiver, and more.

Build amateur transmitters, a 3/4 meter transmitter, and use the latest transmitting tubes. Learn to build broadcast receivers: a universal superhet, a 2-volt DX'er's Superhet, a Superhet De Luxe, and more. You also get articles on servicing, audio amplifiers, radio experimenting, station lists and more. Every page is well illustrated with photos, schematics, drawings and tables.

This is a fun book for old-time radio buffs and builders. Another great book for your radio reference library. Get a copy! 8 1/2 x 11 paperback 64 pages
Cat. no. 20218

\$5.95

Please Use Your Customer Number!

Please use your customer number when ordering. You'll find it on the upper right corner of your shipping label. It helps us get your order out quickly and accurately, and will help us ensure that you get future catalogs.

35' Radio Tower!

BUILD A 35' FREE STANDING TILT OVER ANTENNA TOWER

by David J. Gingery

Let master craftsman, expert-of-the-cheap Dave Gingery how he built a sturdy, reliable tower just a few years ago for less than \$100. Dave has a simple dipole on it. He says he hasn't calculated the wind loading but it should easily handle a tri-band. If you're thinking about a huge cubical quad from days past, that might be pushing it since this tower has no guy wires to strangle you when you mow the grass.

He'll show you to build the jigs to bend up the bracing and align the members while you weld it up. Yes, you have to be able to weld, or know someone who can. Materials used include water pipe, rebar, conduit, a boat trailer winch and assorted bolts.

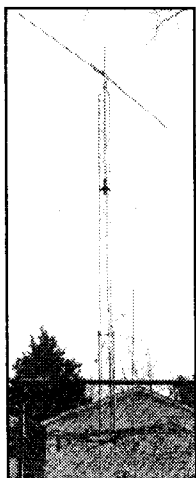
Build a tower and get your antenna in the air. Or use it to fly a jolly roger and scare your neighbors away. Or next time your mother-in-law starts mouthing off hoist her to the top and let the birds roost on her (or worse)!

Typical Gingery quality. Detailed, proven how-to, loaded with all necessary drawings and photos. Not something you'll find every day. Get a copy!

8 1/2 x 11 booklet 24 pages

No. 3012

\$8.95



Gingery Injection Molder Under Development

Plastic Casting Machine

A new project is under development at the secret "Gingery Laboratories" hidden somewhere in the unexplored regions of Missouri. Vince calls it a plastic injection molding machine. Actually, that's what industry has called it for decades. Vince is producing a cheap knock-off for the basement and backyard experimenter.

In such a molder, plastic pellets are held inside a heated cylinder not unlike a hydraulic cylinder. Once the pellets are soft and sufficiently plastic, a ram forces them under enormous pressure through a nozzle into a mold, which is usually machined from metal. After a quick cooling, the molded plastic part is ejected from the mold.

The problems encountered in injection molding are usually revolve around maintaining proper pellet temperature, generating sufficient pressure to get a powerful injection into the mold, and the mold design itself. Temperatures vary all over the map depending on whether you're molding something a thermoplastic like polyethylene or polystyrene or a thermoset like phenolic. Pressures are important, too. The big machines used in industry are rated in tons. And the mold must be an accurately made, properly gated, and easily cooled mold in order to achieve high production speeds.

While all of these concerns can be difficult problems when high speed industrial production is needed, the process can be simplified for experimental use. Here, Vince Gingery has build a simple prototype using a soldering iron element and a common thermostat together with angle iron he had left over from other projects. With it he has been able to melt and cast polyethylene milk jugs into cylindrical pellets using his test mold. Vince expects to develop simple ways to make more complex molds. Vince "Plastic Man" Gingery is hoping to have a new book out revealing his super-hero exploits by the summer of '97. But don't hold him to it. New machines always take longer to develop

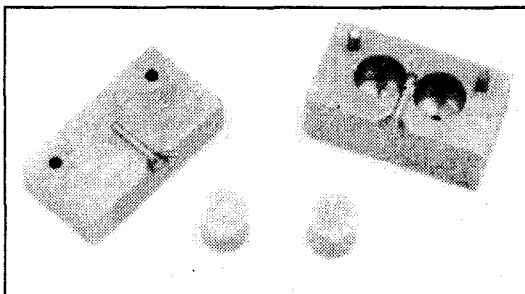
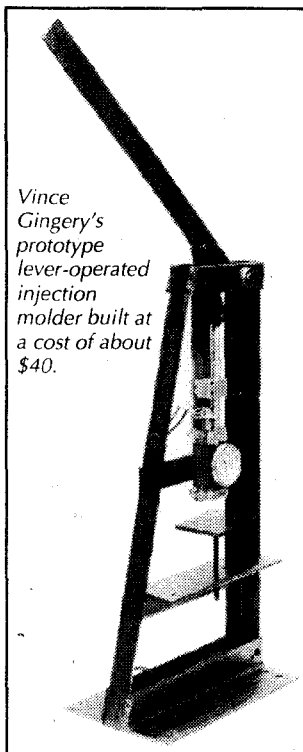
and debug than anyone ever expects.

What can you make with an injection molder? Just look around you. Almost anything you see made of plastic is made this way. Large plastic forms are going to require machinery far bigger than you'll want to fabricate. But smaller items are definitely possible.

Progress has been swift and remarkable. And cost? Vince estimates this new machine would retail for between \$750 and \$1000, and yet he only has \$40 in it. It's almost something for nothing.

We'll see where it leads.

Vince Gingery's prototype lever-operated injection molder built at a cost of about \$40.



Experimental injection molding test mold and castings of polyethylene from old milk jugs made with it.

"Rock" Agrees!

Dear Mr. Lindsay:

A good friend of mine has sent me a copy of your re-done Short Wave Radio Manual of 1934, the year, incidentally, that I first received my amateur license. So it takes me back most pleasantly to the days of my youth. That I have enjoyed perusing it very much goes without saying, I believe.

It was also pleasant to read your commentary upon building regenerative receivers at the back of the book. We agree perfectly upon the effectiveness of these devices. Indeed, it was the inception of this that first made practical, long-distance radio possible. A good, properly used regenerative detector may develop a gain of 30 decibels or more, equal to that of three non-regenerative cascaded stages.

But, as you know, one always gets only what one pays for. Buy a fancy, store bought receiver

and you pay for results with money. Build a "homebrew" regenerative job, and you pay for it in the effort of building and operating it with patience and care, two words that most people scarcely know any more...

Building and using regenerative receivers continues to be a pleasurable experience for me. I have tried to get some young fellows of my acquaintance into this sort of activity with negligible success; they'd rather spend daddy's money upon fancy, store-bought gear. They do not realize how much honest education and real, challenging adventure they're depriving themselves of by that attitude. Too bad...

You are doing your part to keep the great self-education process alive and well. Keep it up!

C. F. "Rock" Rockey

Don't miss Rock's book on secrets of regenerative receivers described elsewhere in this catalog. It's good.

Lindsay Publications Internet Site Being Developed

Lindsay Publications is developing a World Wide Web site. No, it's not going to be an online catalog like the computer geeks keep crying for. It will be essentially a bulletin board with the latest news and nonsense. For instance, if we do our job right at this end, you should be able to log on for five minutes look through the listings to see if a particular book you want is still available. Or see what new books are in the works. Or see more details on the Gingery injection molder. It will be just a high-tech newspaper.

I think the internet is a mixed bag. It's very useful for researching information. But for too many people it's as big a waste of time as television.

Shut the TV and computer off, and get out in the shop and build something. If you think Letterman, Seinfeld, and Beavis & Butthead are great entertainment, or if you know the score to the "Big Game", or if you think "Old Milwaukee" is great beer, then please write me, so I can take you off my mailing list. If your idea of a great TV program is the McNeil-Lehrer Report or the Wings program covering the development of XB-70 Valkyrie Supersonic Bomber, then I want to meet you. Dave and Vince Gingery, and my curator friends at the Smithsonian and I have discussed this very thing many times. And they agree.

My friends are active. They build. The boneheads I avoid are passive. They just sit and watch.

I want you to use our internet site, ftp facilities, and the usenet to increase sophistication and success in your building and experimenting. It's like hooking up to a fantastic library through a telephone line. It can be a powerful tool.

Will You Be Getting Future Catalogs? MAYBE NOT...

We mail new catalogs regularly to customers for whom we can generate 11-digit bar codes. That means if you haven't purchased books from us recently, the computer will not send a new catalog. AND! Because the Postal Service is trying to automate, we must barcode all of our catalogs. If we don't, we pay much higher prices for catalog postage.

If our computer software can't create a barcode for you, you won't get catalogs very often. You MUST have a standard address. Street addresses like "Main & 4th" or "University Hall" or "Old Blowhard Rd" will not work. And I don't care if you have been getting mail there for thirty years. Your address may have changed. If we don't have it, you won't get catalogs. It's simply a matter of economics.

So if you want to continue catalogs, order a book and make sure we have a standard USPS address on our machine for you.

Make and Throw BOOMERANGS at the Tax Man!

HOW TO MAKE THEM AND THROW THEM
by Bernard S. Simon

"It only takes minutes to make a good guaranteed-to-return boomerang. By following a few more simple steps you will learn to throw it so it will always return to you..."

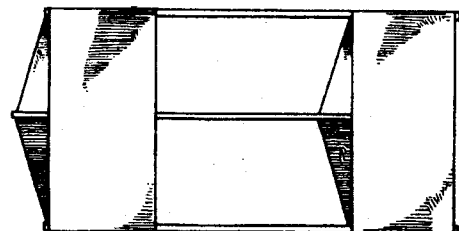
Learn how to make all of the standard designs: pin-wheel, boomabirds, airplane shapes, other ornaments, tumblesticks, and others.

This is a reprint from "Primitive and Pioneer Sports" of 1937. And it's fascinating. Look at the low cost. How can you afford not to have a copy?

5 1/2 x 8 1/2 paperback 99 pages

Cat. no. 41

\$3.95



Go Fly A Kite!

25 KITES THAT FLY

by Leslie L. Hunt

Learn about kitemaking in general. Learn how to make tailless kites such as a butterfly kit, a yacht kite, English kites, five-point kites, or an elephant kite. Make compound kites such as a square box kite, a military kite, or a cross kite. Chapters on flying hints, accessories, and miscellaneous information.

Dirt cheap! Perfect for summer! Get a copy. 5 1/2 x 8 1/2 paperback 110 pages

No. 467

\$3.50

House Your Bird!

**COMPLETE BOOK OF
BIRDHOUSE CONSTRUCTION**

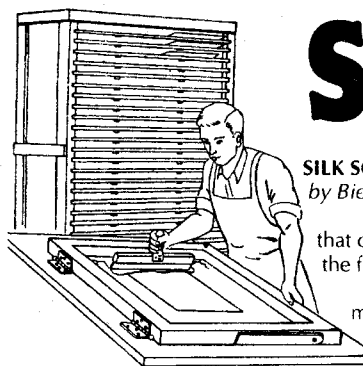
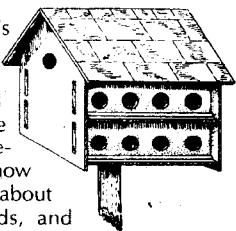
by Scott Campbell

Build a birdhouse! It's easy. Learn about designing the roof, cleanouts, drainage and ventilation, entrance holes, the interior, the requirements of the birds, how to support a birdhouse, about inspection, pest guards, and more.

When your children or grandchildren ask you how to build a birdhouse, you don't have to admit you don't know how. Whip out this booklet and get underway. Or give it to them as gift. Dirt cheap! Good! 5 1/2 x 8 1/2 booklet 48 pages

No. 6010

\$1.95



SILK SCREEN TECHNIQUES
by Biegeleisen & Cohn

Here's another great, inexpensive book on silkscreen printing that can get you started. You'll learn how to make the frame, stretch the fabric, make the base, and how to print.

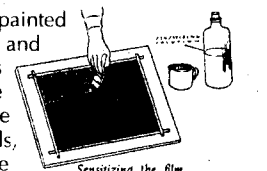
You learn how to make stencils using the paper stencil method, the block-out method, the Tusche stencil method, the film stencil method, and the photographic stencil method. It's all step-by-step.

My favorite method for printing dial markings and other legends on painted metal is by using a photo indirect stencil material such as CDF-4 and monofilament polyester fabric. These two materials are the latest descendants of the materials described in this 1958 book. You should build a simple screen and do some printing. It's easy and inexpensive. Then you can move the latest modern materials and latest plastic based inks to print decals, shirts, caps, cups, and even detailed operating instructions on the face plate of that steam-powered lobotomy machine you're building.

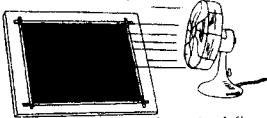
Good book. Great how-to. Reasonably priced. Powerful printing method. You should know how to do this. It can dress up your projects and make them look really professional. Or it can be the beginning of a new career, or adventure in fine art. Get a copy. 6x9 paper-

back 187 pages

No. 5043



Sensitizing the film



Drying the sensitized film.



Making the contact setup.

\$6.95

**COMPLETE BOOK OF SILKSCREEN
PRINTING PRODUCTION**

by J. I. Biegeleisen

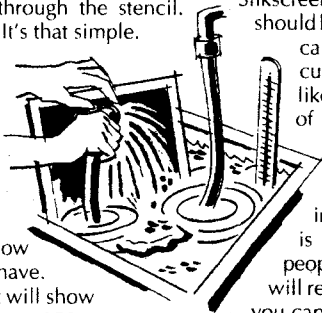
Take an old picture frame, cover it with cloth, glue a stencil to it, and you have a primitive silkscreen. You lay it on paper, cardboard, or a tee-shirt, put thick ink on the other side and use a squeegee to force the ink through the stencil. You've printed your design. It's that simple.

You can print signs, shirts, decals, wallpaper and much more without expensive equipment. This book will show you how to do everything from building the simple frame to multi-color printing.

Silkscreen is versatile and low cost. It's a skill you should have. Here's a dirt cheap book that will show you how. 5 1/2 x 8 1/2 softcover 253 pages

No. 424

\$5.95

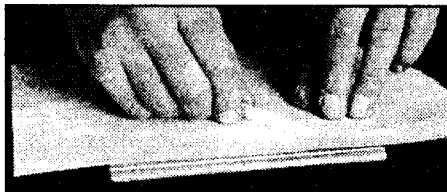


Silkscreen Printing!

**Simple, powerful process
few people know about...**

Silkscreen printing is an industrial process you should know about. It's used to print baseball caps, jackets, cardboard cartons, coffee cups, bottles, and handy little words like "PLAY" and "EJECT" on the buttons of your VCR and stereo. Ever wonder how all those wild artistic designs got onto Compact Discs? The discs could never be run through a printing press. They were silkscreened! This is a simple but powerful process few people know about. This inexpensive book will reveal the process to you. This is a skill you can put to good use. Moneymaker?!!

Cloth Bind Your Favorite Books!



BASIC BOOKBINDING

by A. W. Lewis

Bookbinding is a centuries-old skill that every book freak (that means you and me) should try. It's not all that complicated. And you'll find people are amazed when you show them a book that you have bound.

There all kinds of binding books on the market.

This is probably not the best, but it's so inexpensive, every-

one can afford a copy. You can make the special equipment you need. And you get use locally obtained materials. I know. I've done it.

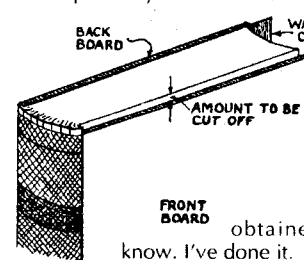
It takes time to bind a book. But it's fun.

Try it. Order a copy of this.

5 1/2 x 8 1/2 paperback 144 pages

Cat. no. 436

\$4.95



Survive in the Woods!

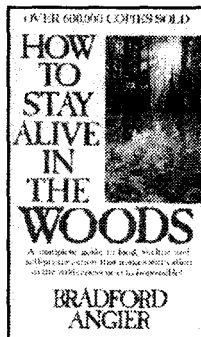
HOW TO STAY ALIVE IN THE WOODS

by Bradford Angier

"For over twenty years, sportsmen, hunters, and camping families have been carrying this book with them every time they venture into the woods. It is a life-saving tool which details all of nature's resources and shows — in 26 clearly written, illustrated chapters — how to find food, water, warmth, and shelter when lost or stranded.

The book is full of secrets that can help save time, energy — and even lives. For example, it tells: how to spark a fire by using a drop of water as a lens; how to obtain meat and fish by primitive means; and how to protect yourself against natural hazards..."

That pretty well says it. This "drug-store" paperback is wall-to-wall practical tips and how-to. Lots of quality information for a low price. A classic! Get one! 4 x 7 mass paperback 285 pages. No. 682 \$8.00



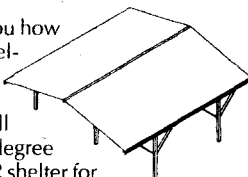
More Than Just a Car Port!

LOW-COST DOUBLE CARPORT PLANS

by Ken Dixon

Dixon will show you how to build a low-cost shelter consisting of a sturdy frame covered with a tarpaulin. It will provide a surprising degree shelter for your car. OR shelter for logs you may have drying. OR shelter for your outdoor foundry furnace (watch the fire hazard). OR shelter for your steam engine. OR, I think you get the idea.

Estimated cost looks like about \$200 (1993 prices), and as much as \$500 if you want to completely frame it out and put on a shingle roof. You get a well-done booklet with complete plans and how-to from someone who has done it. A great low-cost shelter for a craftsman. Think about it. 5 1/2 x 8 1/2 booklet 13 pages No. 5007 \$4.95



What Warped Sense of Humor?

Is he talking about me?

"Lindsay,

I always enjoy your catalogs both inside and outside. Your sense of humor is as warped as mine.

Your business is the only one that I would gladly write a testimonial for. Always great books and great service. I wish that I could afford to buy a copy of every book, and had the time to build all the projects.

Keep up the search for good books, and keep having fun with the catalogs."

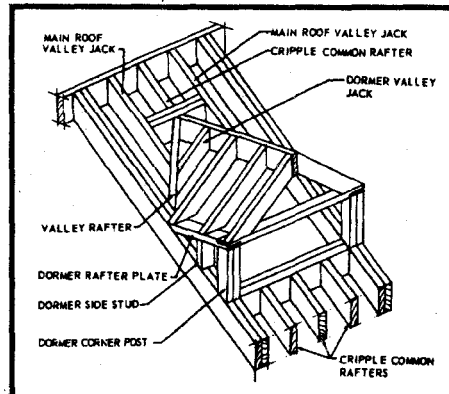
JOHN WILLIAMS

BASIC CONSTRUCTION TECHNIQUES for Houses and Small Buildings Simple Explained by Bureau of Naval Personnel

Learn carpentry! Maybe you could build a regulation Marine barracks in your backyard!

"Many homeowners have at one time or other considered building their own home or adding an extension to their present house. One of the best backgrounds for such home construction is offered by the manual which the U.S. Navy has prepared for use in its own classes.

Detailed chapters cover such basics of con-



BUILD A HOUSE!

struction as: concrete - selecting the mixture, using forms and joints, reinforcing, placing, finishing, and curing concrete, and using concrete for foundations, floors, beams, columns, and walls; masonry - selecting bricks, mortar and patterns, laying concrete blocks, structural clay tile, stone, and brick, insuring watertightness and proper bonding, and using brick for door and window sills and lintels; woodworking - using and selecting tools and materials; rough carpentry - building framings for foundations, floors, walls, and roof; exterior finishing - finishing cornices and roof, installing asbestos-cement siding, insulation and outside wall covering; interior finishing - completing ceiling, walls, stairs, window sashes, casings, and doors, adding baseboards and trim, and plastering, stuccoing, and setting tile; and painting - selecting the paint, preparing surfaces and using techniques for the most efficient and most permanent job." Lots of useful instruction at a reasonable price. Yes, you even get plans for regulation latrines. Your mother-in-law will love that! Get a copy. 6 1/2 x 9 1/4 paperback 568 pages over 675 illustrations Cat. no. 589 \$14.95

Make a Fur Coat!

Politically Incorrect! Chemicals! Oh, my!

HOME TANNING OF LEATHER AND SMALL FUR SKINS

by US Dept Agriculture reprinted by Lindsay Publications

This government booklet was revised in 1954 and 1962, so it certainly goes back into the 40's and maybe earlier. Is it available today? Probably not because some of the chemicals described are potentially dangerous, potassium chrome alum, for instance. It wouldn't be politically correct to put such dangerous information into the hands of the public.

You get old information on having hides tanned, buying leather by the side, home tanning procedures using bark tanning, chrome tanning, alum tanning, and finally details on making fur skins. The authors tell you that you can make furs adequate for winter protection, but nothing beautiful enough to be used for fur coats. You get tips on making shoe and harness leather.



Professor of Chemistry, Forrest Thomas, sent me this tanning booklet and said, "This booklet has the simplest, most easy-to-follow instructions for tanning hides, with or without hair, that I have ever seen. I have successfully tanned, with hair on, bear, deer, coyote, marmot, and squirrel hides. This booklet could be a useful addition to your offerings..."

The instructions are clear and straight to the point with photographs and drawings. We scanned the original text into the computer and reset it so that it is easier to read. We also computer-enhanced the original photographs which looked like they had been taken during a full eclipse. The enhanced version is much better than the original.

This is a great little booklet with practical how-to. Again! You had better learn to handle the chemicals described or you could get hurt or poison your surroundings. If you can't walk and chew gum at the same time, forget this. Otherwise get a copy and turn your neighbor's barking dog into several pair of super warm mittens. 5 1/2 x 8 1/2 booklet 24 pages No. 21745 \$4.95

Outdoor Survival Skills!

OUTDOOR SURVIVAL SKILLS

by Larry Dean Olsen

From the back cover:

"This is the revised and expanded fifth edition of the classic manual on outdoor survival. Chapters on shelter, fire, water, plants, animals, and special skills explain how to: • build a lean-to; brush, pole, or grass thatch, wickiup; wattlework shelter; snow cave • make fire with flint, bow drill, hand drill, fire saw; make a fire carrier or bundle • obtain drinking water from dew, water pockets, an evaporation still • harvest and prepare food plants in the wild • No. 6041



fashion tools and weapons from stone, bone and wood • make rawhide, tan leather; weave bark and other natural fibers • harvest grasshoppers, ants, grubs; trap, hunt and stalk larger game; make fish hooks, traps and spears"

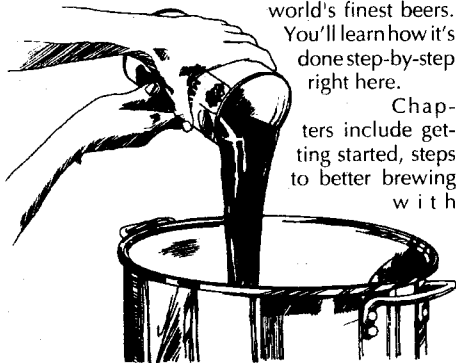
With this information you can walk into the wilderness with just the clothes on your back and survive! Native Americans knew these things. So can you! Get a copy. Well-illustrated. 6x9 paperback 224 pages

\$11.95

Brew Your Own Beer!

BREWING THE WORLD'S GREAT BEERS
A Step-by-Step Guide
 by Dave Miller

You can come very close to duplicating the world's finest beers. You'll learn how it's done step-by-step right here.



Chapters include getting started, steps to better brewing with

malt extract, first steps in grain brewing, the last step: all grain brewing, going semi-pro, glossary, bibliography, and sources.

This is full tilt. No simplification. You can brew a quality pale ale, a pilsner, or you can jury-rig an old refrigerator and get into lagering. You'll learn all the details of yeast, malt and measurements in degrees Lovibond, sugars, hops and their AAU's, all the equipment and techniques. If you really get into this, you'll learn the intricate technique of maintaining pure yeast cultures just as the labs in the biggest breweries do and lots more.

You can make great ale, stout, porter, German ales, weizenbier, Munich dunkel, helles bock, and much more. You'll probably want to make some of your own brewery equipment. Your wife just might use the rolling pin on you when she finds you've turned the basement into a giant chemistry set, and when she finds that you and your friends are rarely sober anymore. But doesn't it sound like fun?

You get sources for brewing publications, associations, equipment, supplies and all the rest. This is one of the best brewing books I've seen yet. Consider it while I open a brew. 6x9 softcover 150 pages
 No. 6047

\$12.95

Incredible Beer Formulas!

HOMEBREW FAVORITES
 by Lutzen & Stevens

Here are more great home brew recipes than I've ever seen in one place before. You can make just about any type of beer you want from light pilseners to syrupy stouts. Many beer fanatics brew beer from grain. The fact is you can actually brew much better beer from extracts than you can buy (at least here in the states.) And all the recipes in this book appear to be extract recipes - prize winning recipes at that.

If you like beer, and I mean, you drink beer because you like it, not because its "the thing to do," then it's time to brew your own. This is a book that will help you produce a brew that will knock the socks off your neighbors and friends and solidify your reputation as a magician who can do anything. Great recipes to use as is, to modify, or to refer to for ideas. Get a copy. 6x9 paperback 250 pages
 No. 6072

\$12.95

BUILD BREWING EQUIPMENT

BREW WARE HOW TO FIND ADAPT AND BUILD HOMEBREWING EQUIPMENT
 by Lutzen & Stevens

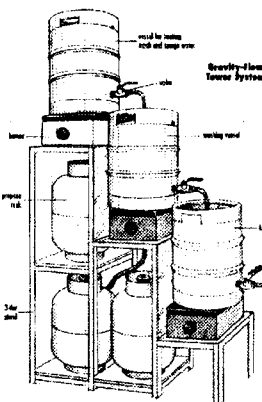
Brewing beer is fun, easy, and tasty. And good beer costs no more to brew than the garbage you buy that is marketed as beer. I always have a couple of hundred of bottles of quality Porter aging. And when the Gingery's stop buy, we always manage to empty more than a few.

You need some simple equipment. But some guys get so caught up in brewing (and I know why) that they want bigger and better batches brewed directly from grain. They need bigger and better equipment, most of which can be built inexpensively at home. And here are the plans to do it:

You can build equipment for ingredients processing and storage, working with wort, chilling and aerating wort, fermenting, measuring, bottling, kegging and mashing. There is even information on growing and drying hops, and culturing yeast. About the only thing missing are plans for a stomach pump.

If you're not brewing, then try it. If you're brewing, then upgrade your system with this book. For the machinery and beer fanatic. Get a copy. 5 1/2 x 8 1/2 softcover 260 pages
 No. 6090

\$16.95



Basic Brewing!

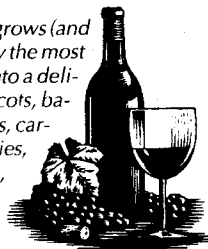
GUIDE TO BETTER WINE AND BEER MAKING FOR BEGINNERS
 by S. M. Tritton

There are many books on making beer and wine, and this may not be the very best or the most modern. But what you get is value. You get the basic processes and the recipes at a very reasonable price.

"Almost anything that grows (and honey too) can be made by the most inexperienced beginner into a delicious wine: almonds, apricots, bananas, beetroots, bilberries, carnations, chamomile, cherries, cloves, corn, currants, dates, figs, ginger, golden rod, greengage plums, hawthorn, lichi fruit, marrow, oak leaves, oranges, pansies, rosehips, tangerines, tomatoes, as well as grapes, are a few of the 125 fruits and vegetables for which wine, beer and liqueur recipes appear in this A-Z guide."

Great book to start with. Reprint of the 1965 original. Consider it. 5 1/2 x 8 1/2 paperback 157 pages
 No. 6090

\$6.95



Winemaking Classic!

FIRST STEPS IN WINEMAKING
 by C J J Berry

This is the classic text on winemaking first published in 1960. This is a reprint from the 1987 8th edition.

"You get over 130 detailed recipes all arranged in the months of their making so that you can pursue your winemaking all the year around. Wines from fruit, flowers, vegetables, foliage, dried fruit and wine kits, notes on using the hydrometer and showing wine, and judging..."
 Showing? Judging? Nuts! Drink it.

Before you get hit with the recipes you get all the essential know how. Over the years over two million people have used this book to get started.

Having brewed a little wine, I think this is one of about three books you should have on hand to refer to. Guaranteed to get you started.* Classic book. Get one. 6x8 softcover 235 pages
 No. 6091

\$12.95

ADVANCED WINEMAKING

THE COMPLETE HANDBOOK OF WINEMAKING
 by American Wine Society

Making wine is easy. Juice, sugar, yeast and you're on your way. The hardest part is keeping things clean so the bugs don't turn the must to vinegar.

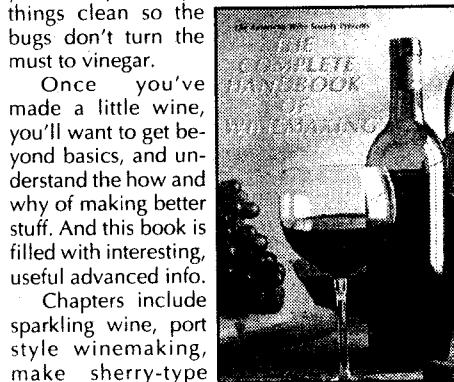
Once you've made a little wine, you'll want to get beyond basics, and understand the how and why of making better stuff. And this book is filled with interesting, useful advanced info.

Chapters include sparkling wine, port style winemaking, make sherry-type wine, wine analysis, red wine blending, remedies for winemaking mistakes, when malolactic fermentation isn't desired, simple and fast chromatography, making wine vinegar, elements of wine tasting and much more.

Loaded with ideas. Like the dude who stashed his potent wine in the attic of his hot, hot garage all summer in order to force oxidation and create a great sherry. He was simulating the hold of a ship. You get hints, tips and recipes on all kinds of wine.

Great book. If you want to make truly drinkable wine, you should have a copy. 6x9 softcover 217 pages

\$15.95



No. 6092

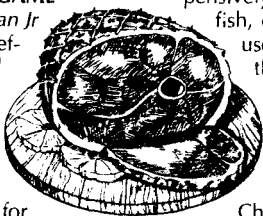
PRESERVE YOUR MEAT!

THE CANNING, FREEZING, CURING & SMOKING OF MEAT, FISH & GAME

by Wilbur F. Eastman Jr

Here's a great reference book that will allow you to preserve meat for the future. You get a mixture of plans, tips, how-to instructions, and recipes for preserving all types of meat with all types of processes.

Chapters include Basic Information, Canning, Freezing, Curing, How to Build a Smokehouse, Beef and Veal, Pork, Lamb, Poultry, Game,



Fish, and Recipes.

You'll learn to process meat inexpensively and safely. If you hunt, fish, or raise livestock, you can use the techniques of early settlers and explorers who had no refrigerators.

No, I didn't see anything on pickling those pesky alligators that live in New York sewers. Or was it the Chicago sewers? But I did see

tips on just about everything else. A classic book first released in 1975 and updated in 1989. Excellent book. Get a copy. 5 1/2 x 8 1/2 paperback 202 pages

Cat. no. 61 \$9.95

Full Tilt, Hot & Spicy Chili!

HOT & SPICY CHILI

by DeWitt, Wilan & Stock

This is one of the two best chili books I've ever seen.

"A Collection of 150 of the Very Best Chili Recipes from the Chili Capitals of America." Try "Ed's Buffalo Snort Green Chili", "Cock-Eyed Black Bull Chili", "Snake Rattle & Roll No-Beans Chili", or even "Buzzard's Breath Chili". Most of these recipes have won awards in chili cook-off contests, and although I've haven't tried them yet, I can tell they've got some twists, turns and secrets that are well worth experimenting with.



Contents include the evolution of chili con carne, chili cookin' pantry and primer, cookoff chilis, southwestern chilis, chilis of celebrities & friends, starters, accompaniments and fine finishes. You also get an appendix listing publications, associations, cookoffs, mail-order suppliers, and a bibliography of other publications.

Serve you and your friends a bowl of hot, tasty chili and wash it down with a bottle of top-rate homebrewed ale. You'll be famous. Good eating. Try it. 7 1/2 x 9 softcover 277 pages No. 6068 \$12.95

Make Sausage!

HOME SAUSAGE MAKING

by Charles Reavis

Make great mouthwatering sausage! Over 32 types - both fresh and cured. It's all here! Make summer sausage, Genoa salami, mild salami, bratwurst, frankfurters, bologna, kielbasa, Braunschweiger, chicken sau-

sage, and varieties from bison, squirrel, opossum, rabbits, and even fish! You get over 175 recipes in this great how-to manual and cookbook! Order a copy.

8 1/2 x 11 paperback 168 pages Cat. no. 635 \$14.95

Make Soda Pop!

SODA POP!

Make your own soda! It's easy! And it's great soda! Build this remarkably simple device using hardware store components, hook it to a bottle of carbon dioxide, and you're ready to make soda. The major expense is the CO2 tank and its regulator. But you'll quickly recover that cost in a single summer.

You can make great root beer, carbonate Kool-Aid, Coca-Cola, and other drinks at bargain prices. You can make gallon after gallon of soda water for ice cream sodas or for mixing with your favorite scotch. Experiment!

It's one of the most useful and popular machines (at least with the kids) I've ever built. A single small tank of CO2 last me about a year, and that's an ocean of soda. Each jug is very inexpensive. Get a copy, and build a soda pop machine! 5 1/2 x 8 1/2 booklet 22 pages

No. 88 \$3.00



Make Sourdough!

BAKING WITH SOURDOUGH

Learn how to make a sourdough starter and use it to make a variety of delicious breads and biscuits like the gold rush prospectors did. This "Back-to-the-Land" bulletin published by Garden Way provides you with hints, tips, and recipes. 5 1/2 x 8

1/2 booklet 32 pages

Cat. no. 2006

\$2.95



CHEESEMAKING!

CHEESEMAKING MADE EASY

by Ricki & Robert Carroll

Make your own cheese! Good stuff! The authors will tell you how, in easy-to-understand terms - from simple Cottage Cheese and Mozzarella to delicious Blue, Gouda and Colby cheese. You'll be surprised how easy it is. How little equipment you'll need. How inexpensive, particularly if you have a source of cow's

or goat's milk. And how delicious the results, even on your first attempt. Choose your favorites from sixty different varieties.

Great book! Great photos, drawings and recipes.

Get a copy. A skill practiced for centuries, but one that few people know. But you will. Order today.

8 1/2 x 7 softcover 136 pages No. 653 \$12.95

Homestead! Tell the Boss to Shove It!

FIVE ACRES AND INDEPENDENCE

by M. G. Kainb

Tell the boss to hang it, and move to the open country and homestead! It's possible. This reprint of the 1935 original will show you as it did thousands during the Depression how to survive comfortably on five acres. You'll learn about greenhouses, coldframes, soil, manure, fertilizers, compost, tools, weeds, orchards, pruning, seeds, transplanting, berries, things to sell every day, grapes, storage, and much more. There's so much info here at such a low price, you can't afford not to have a copy. 397 pages 5 1/2 x 8 1/2 paperback

Cat. no. 608

\$7.95



PISSING IN THE SNOW AND OTHER OZARK FOLKTALES

by Vance Randolph

Randolph collected legends and tales of the Ozark people for over forty years. In 1976 the University of Illinois found the courage to put the collection into print. If you like a little ribald humor once in a while, this is really funny in places, and quite interesting.

"One time there was two farmers that lived out on the road to Carico. They was always good friends, and Bill's oldest boy had been a-sparkin one of Sam's daughters. Everything was going fine till the morning they met down by the creek, and Sam was..."

And on it goes. Each story is several paragraphs long, and most use words you won't find in family newspapers (but you WILL find in movie theaters). The introduction explained, "The Ozark hillfolk seldom tell ribald stories in mixed company, as many city people do. They have their own

DIRTY STORIES!

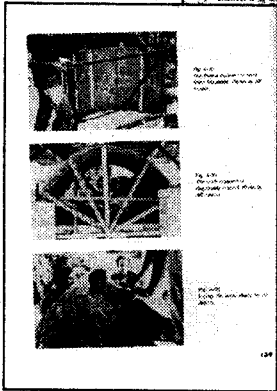
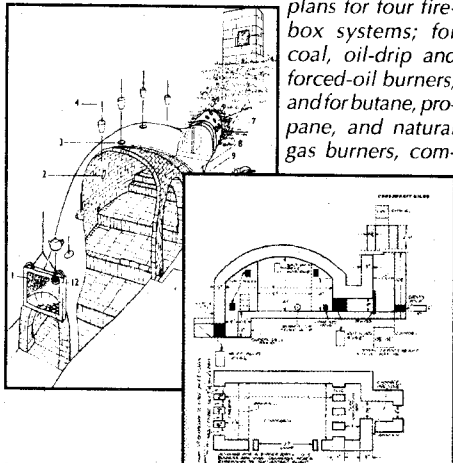
ideas of propriety, and are often shocked by innocuous urban conversation. The old-timers feel that sexual and scatological topics have no place in casual talk between men and women... Most of the bawdy tales which I have collected were told by adult-males when no womenfolk were about... Such stories are not aphrodisiac, or intended to incite antisocial sex activity.. They merely evoke laughter."

Crazy book! Dirty stories. Recommended to me by local bankers, lawyers and other professionals with a sense of humor. If you're offended by this type of material, for God's sake DON'T order a copy. Otherwise, don't wait! 5 1/2 x 8 1/2 softcover 153 pages (no illustrations fortunately) No. 6037 \$8.95

THE KILN BOOK

Materials, Specifications, & Construction
by Frederick L. Olsen

"...covers the principles of efficient design... Olsen evaluates refractory materials and covers building methods, with instructions for flues, curved and common walls, five types of bricklaying courses, and five types of arches. He includes plans for four fire-box systems; for coal, oil-drip and forced-oil burners; and for butane, propane, and natural gas burners, com-



plete with installation of pressure regulators and safety shut-off controls.

Complete plans and instructions are provided for building a kiln of any size, of any type, for any purpose:

Kiln Handbook!

Crossdraft: single and climbing chamber tube, Bizen, LaBorne tunnel, and tandem salt-glazing kilns

Downdraft: Tajimi, circular dome, side-fire salt, and fastfire wood kilns

Electric (no-draft): front- and top-loading, sectional, polygonal, and cubic kilns...

This hardcover book is loaded with how-to on building kilns for firing ceramics. All nuts and bolts. Dimensioned drawings. Tables. Photos. Hint, tips and secrets. Good stuff.

So you don't make pots. What good is it? Think! What is a cupola? Just a special kiln for melting iron. Kilns are used to make coke and charcoal. The furnaces that melt glass use the same basic furnace principles revealed here. In fact you might make a few bucks and build a crematorium for the local undertaker. I wonder what that would smell like!

Good book. Expensive, but good. I wish I could find more books as jam-packed with useable info as this one. If you ever intend to build a furnace, even if its only an oven to cook your Christmas goose, then get a copy of this for your reference library. Do it now. (Books like this in the past have had a way of disappearing...) 7x9 hardcover 291 pages

No. 6089

\$40.00

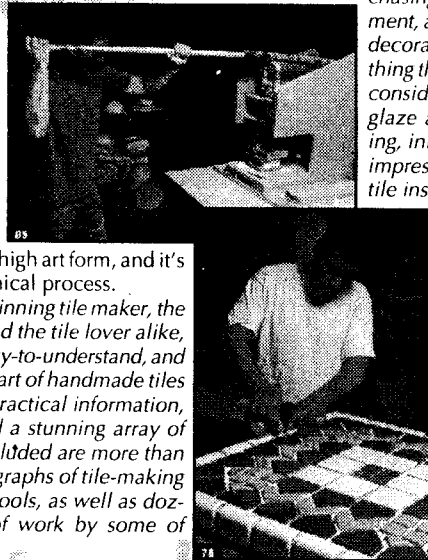
Make Ceramic Tile!

HANDMADE TILES

by Frank Giorgini

The walls of Babylon were decorated with beautifully glazed bricks and tile decoration. Many glamorous homes have floors and walls decorated with handmade ceramic tile. It is truly a high art form, and it's a very interesting technical process.

"Written for the beginning tile maker, the accomplished artist, and the tile lover alike, this comprehensive, easy-to-understand, and loving treatment of the art of handmade tiles provides a wealth of practical information, a touch of history, and a stunning array of color photography. Included are more than eighty 'how-to' photographs of tile-making steps, techniques and tools, as well as dozens of color photos of work by some of today's best tile artists.



The author gently guides the reader through setting up a workshop, selecting materials, purchasing and making tools and equipment, and designing, fabricating, firing, decorating, and installing tiles. Everything that the beginner needs to know is considered—making relief tiles, underglaze and glaze decoration, slip trailing, inlay, sgraffiato, shellac resist, and impressing, as well as mosaics and the tile installation process..."

I can't help but think that with just a little artistic talent (or an ability to steal ideas) and some connections with a contractor or interior decorator you could mass-produce clay tiles, make good money, and have fun doing it. Kind of expensive book, but color printing is not cheap. Excellent value. Unusual content. If this strikes your fancy, get it now while you can. Excellent. 9x12 hardcover 144 pages

Cat. no. 6071

\$24.95

Wood-Fired Ceramics!

WOOD-FIRED STONEWARE AND PORCELAIN

by Jack Troy

"This authoritative book is the first to deal comprehensively with the historical, technical, and aesthetic aspects of woodfiring..."

Here you get a book that looks at the technology of woodfiring. Chapters include the life of the fire, learning from the past, wood and combustion, kilns, clays for woodfiring, glazes for woodfiring, stacking and kiln setting, woodfiring the context of teaching, safety and more.

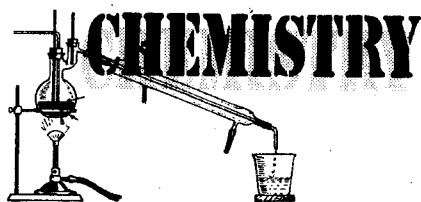
You'll journey from Scotland to Japan to Vermont to Australia and other places to peak inside of artist's kilns, discover their firing techniques, and look at their incredibly beautiful pots. You get dimensioned drawings of a number of kilns, glaze formulas, technical data of wood and its suitability and more. If you're interested in digging clay out of the ground and using a tree to turn it into rock-hard ceramics, this will give you great information that you can use as is, or better yet, adapt to your own needs.

Specialized info of excellent quality. So make a pot. Better yet, make your own insulators for that two million volt Tesla coil you intend to build. Somewhat expensive, but it delivers. 8 1/2 x 11 hardcover 174 pages

No. 6088

\$34.95





CHEMISTRY

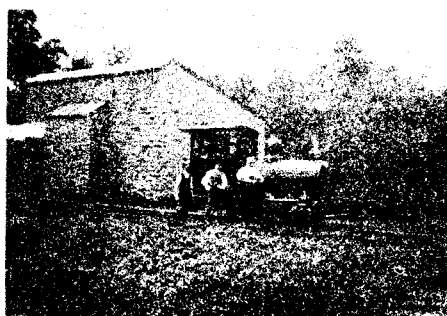
HISTORY OF EI DUPONT DE NEMOURS POWDER COMPANY

by Banker & Investor Magazine
reprinted by Lindsay Publications

The duPonts made their fortune making gunpowder for the U.S. government. Both duPonts came to the U.S. in 1800, and were asked to set up the first high-quality powder factory in the new country. The duPonts earned a fortune their first year!

This 1912 history of the company covers the problems of powder and its manufacture, the plants they built, and the history of explosives in general, including mention of a nitro-glycerin factory in Glasgow turning out 50 million pounds of nitro each year!

You get pictures of the ruins of the first



DUPONT GOT RICH MAKING EXPLOSIVES!

powder mill, a letter from Thomas Jefferson, their early salt-peter refinery, men wheeling carts of nitro, the acid plant at Louviers CO, experimental black powder press house, experimental equipment for purification of nitro, and much more.

Part history, part technology, and part advertising. Interesting stuff! Get a copy!

5 1/2 x 8 1/2 softcover 224 pages

No. 20579

\$9.95

Hercules Dynamite on the Farm DITCH BLASTING

by Hercules Powder Company
reprinted by
Lindsay Publications

Learn about the selection of explosives and blasting supplies, about Hercules products of 1934 such as Hercotol, Hercules Ditching Dynamite, Extra Low Freezing Dynamite, Hercomites 2 to 7, blasting caps, safety fuses, and blasting machines — you know, the T-handle device

used to detonate the charge. You may want to have a Ohmmeter-Galvanometer, a rheostat, leading wire, cap crimping pliers with fuse cutter, and other equipment.



Chapters include priming methods, lighting fuse, hangfire and misfires, how to handle frozen dynamite, storage of explosives, transportation of explosives, safety, and of course, the last half of the book concerns itself with laying out and blasting ditches.

Make yourself a moat! Keep the neighbors awake

at night! If you intend to blast, stay away from me. Interesting reading!

5 1/2 x 8 1/2 softcover 64 pages

No. 20480

\$4.95

Dynamite Your Way To Pay Dirt!

EXPLOSIVES FOR SHALE AND CLAY BLASTING

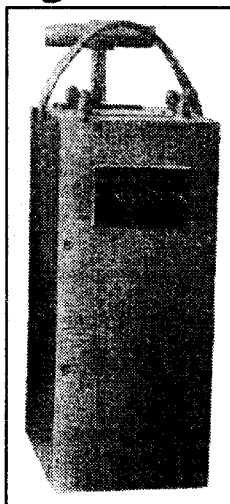
by E. I. Du Pont de Nemours
reprinted by Lindsay Publications

In 1916 DuPont published this booklet to entice people to use their dynamite to clear the land of stumps and boulders so you could mine shale and clay. You get info on digging plastic clays, mining flint clays, draining clay pits, and brief info on changing the course of a stream. The last part of the booklet goes into explosives and blasting supplies. You get details on old time dynamite, blasting caps, safety fuse, cap crimpers, T-handle blasting machines (including an internal view), leading, wire, rheostats, etc. The last couple of pages will tell you how to dig post holes with dynamite and how to handle a misfire.

Interesting. You could probably get enough info to build a replica of a blasting machine and dynamite sticks to scare the hell out of door to door salesmen! (Just don't take it to the airport. You'll do time...) An old book, but dynamite is still dynamite. Unusual. 5 1/2 x 8 1/2 booklet 48 pages

No. 21257

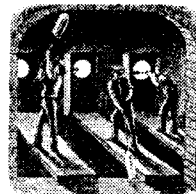
\$4.95



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BOOKLETS!

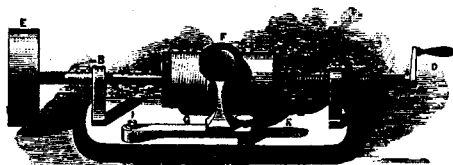
Notebook 2 - GLASS!



Go back over a hundred years and discover the furnaces, crucibles, and formulas used then to make windowpane glass, Bohemian, bottle, and crystal glass. You'll see several different machines for casting it. You'll learn how crucibles were made. You'll even get formulas for fire brick. 5 1/2 x 8 1/2 booklet 24 pages

No. 865

\$3.50



Notebook 11 - PHONOGRAPH & ICE MAKING MACHINERY

From 1879 a short article on Edison's new phonograph. The rest covers refrigeration which was the cutting edge of technology at the time. You'll learn about unusual refrigeration processes long forgotten like the Johnston & Whitelaw machine, the Vander Wyde machine which used naphtha or even gasoline!!!, Kirk's cooling machine and others. Also included are formulas for chemicals which when mixed produce intense cold. Unusual! 5 1/2 x 8 1/2 booklet 14 pages

No. 880

\$2.75

Notebook 18 -

GLUE, GREASE & MATCHES

From "The Techno-Chemical Receipt Book" (1886) by Brann & Wahl come formulas and instructions for making adhesive grease, grease for water-proofing leather, lubricants for machines, and more. Learn how to make glue and extract gelatin from hides, bones, and cartilage. Make isinglass (fish glue), printer's rollers from glue and glycerin, and more. Make Swedish matches, parlour matches, matches inextinguishable by the wind, and more. 5 1/2 x 8 1/2 booklet 15 pages

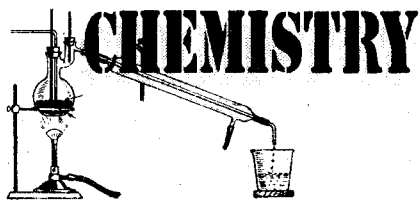
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They will be glad to take your phone order, but when you call have your list of books written down and your charge card ready. I keep them hustling to serve you. I don't want you gumming up the works by wasting their time. (If you call and start thumbing through the catalog, I'm comin' out to wup you up long side the head. You've been warned...)



CHEMISTRY

LINDSAY'S CHEMICAL CROSS REFERENCE

by Lindsay Publications Inc
If you haven't run into the problem yet, you will. You'll be reading some old chemical formula calling for mirbane oil, salt of satum, or liver of sulphur. A quick check of this handy list of chemical terms would tell you that you need nitrobenzene, lead acetate, or potassium sulphide.

Chem Cross Reference!

Translate Obsolete Old-Fashioned Chemical Names

What we did was enter into our computer two thousand chemical equivalents gleaned from a variety of chemistry textbooks, industrial references, and formularies in our reference library dating back to the early 1800's. The computer merged and sorted the lists into alphabetical order. The result is a chemical cross reference.

We have kept unusual and probably incorrect spellings. We have made no attempt to verify that the definitions are correct. What we have done is provide you with one master list of the best equivalents we could find. We've already found it useful, and you will too. Get a copy for your reference library. 5 1/2 x 8 1/2 softcover 44 pages
No. 20170 \$5.95

MANUAL OF FORMULAS

MANUAL OF FORMULAS, RECIPES, METHODS AND SECRET PROCESSES

edited by Raymond Wailes
reprinted by Lindsay Publications

Here's a great low cost collection of hundreds of formulas on just about every subject you can imagine compiled from the pages of Popular Science Magazine and published in 1932.

You can make soap bubble liquids, solidified gasoline, waterproof matches, lacquer for brass, silver solder, photographic printing paper, slow-drying putty, blackboard paint, thermite welding mixtures, pewter alloy, garden sprays, soaps, preparations for dance floors(?), concrete waterproofing compound, fireworks, cosmetics, adhesives and much more.

You'll learn how to mix up compounds for polishing and plating metal. Learn how to blacken brass, blue steel, to make silver nitrate from old spoons, mix up low temperature alloys, dry flowers, brew wine, re-ink typewriter ribbons, make blueprint paper, dye cloth, make flypaper and much more.

Unlike other formularies, this one is new enough to be useful and old enough to have unusual formulas. And the price is quite reasonable compared with the large volumes which are interesting but often contain many formulas that are of little practical value. An interesting book of definite value. Order a copy today. 4 1/2 x 8 softcover 250 pages
No. 20366 \$9.95

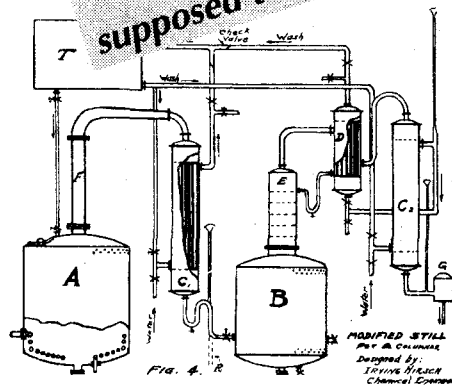
MANUFACTURE OF WHISKEY, BRANDY & CORDIAL

by Irving Hirsch
reprinted by Lindsay Publications

What you get here are the secrets of making good, drinkable booze that you're not supposed to know! In 1937 the author, a chemical engineer, put together this industrial handbook to teach others how to produce hard stuff. I guess there wasn't much to do but drink during the Great Depression.

Chapters include whiskey, treatment of grain, rye whiskey, distillation of liquors, distillery equipment and appliances, manufacture of brandy, of apple-jack, of pear brandy, of slivowitz, of fruit brandy, of rum, of gin, of miscellaneous liquors, of cordials, blending, maturing of spirits [very important], artificial maturing of spirits [trade secrets?], clarifying liquors, water, sugar and syrup, coloring and much more.

SECRETS
You aren't supposed to know!



Manufacture of Whiskey, Brandy & Cordials

We're not talking about small moonshine stills or "white lightning" that tastes like liquid fire. This is good stuff. We're dealing with big stills and big processes the way the pro's did it and are probably still doing it. You get diagrams of many different types of stills, condensers, filters and so on. You get recipes for everything from gin to creme de cocoa. You get useful tips on blending scotch whiskeys, problems that occur if whiskey stays in bond too long, problems with sweating casks and much more.

Although I'll never make my own booze, I found this book interesting because this kind of information is never published. It's passed on through apprenticeships. The text is typewritten, and the illustrations are industrial. I get the overpowering feeling that this is information that the government and especially the distilling industry wants to keep to itself.

Excellent, rare information. An interesting book on something that people have enjoyed and gotten into trouble with since the beginning of time. Get a copy and enjoy it. Order a copy today!

5 1/2 x 8 1/2 softcover 183 pages

No. 20935

\$9.95



Build a Laboratory!

HOW TO MAKE AND USE A CHEMICAL LABORATORY

by R F Yates and revised by S A Pellerano

The subtitle reads "A book for beginners setting forth the fundamentals of chemistry in easily understandable terms. The many interesting experiments, together with the wealth of chemical knowledge contained herein, make this book indispensable to the student chemist and amateur experimenter."

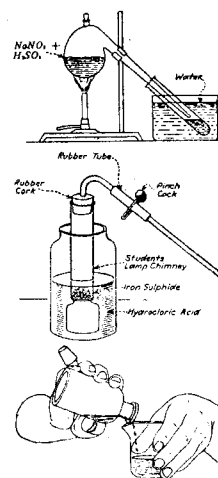
You get three parts: introduction to the study of chemistry, equipping a small chemical laboratory, and chemical experiments. Within each part are many, many little sections on individual topics such as the law of combining weights, acids and bases, experiments in electrochemistry, fire clay crucibles, filter paper, beakers, fractional distillation, experiments in catalysis, cutting glass tubing, sealing a platinum wire into glass, experiments with aluminum hydroxide, sulfur dioxide, sulfuric acid, platinum wire flame tests, and much, much more.

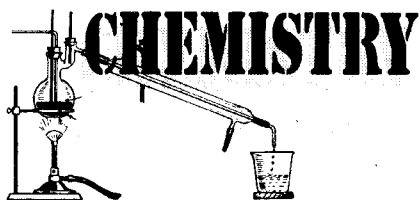
You get illustrated suggestions on how to build various pieces of equipment such as laboratory shelves and benches, an exhaust hood, an alcohol burner, a small chemical balance, a test tube holder, a ring stand, a hydrogen sulphide generator, a small electric furnace and much more.

Reading this is not going to make you an expert chemist. This was put out in 1920 and 1939 when people wanted to experiment with chemistry. It's fun reading with great ideas. Just the details on building a sensitive lab balance is worth the price. And the electric furnace should melt steel!

Some of this of these experiments are certainly dangerous. You had better research safety before you try some of this stuff. Common sense is necessary. I warned you.

Fascinating handbook that is almost impossible to find these days. (It's now environmentally incorrect...) Interesting reading. Get a copy. 6x9 softcover 140 pages
No. 21737 \$9.95





A THOUSAND AND ONE FORMULAS –
The Laboratory Handbook
 for the Experimenter
 by Sidney Gernsback
 reprinted by Lindsay Publications

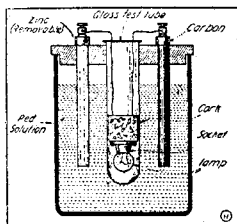
Here you get formulas on cements and glues, compositions of all kinds, glass and glass working, inks, leather polishes, metal-craft, perfumes, soaps, photography, blue-print and other papers, plating, pyrotechny, polishes and stains, varnishes and paints, cleaning compounds, wood-craft, chemical lab hints, mechanical lab hints, electrical lab hints, miscellaneous formulas and an appendix.

1001 FORMULAS

Unusual 1920 Formulas for the Kitchen Chemist

Not everything here is useful in my opinion, and some of it is downright dangerous. Some of this looks like it came out of the Boy Mechanic books. Learn how to convert coin silver into pure silver, formulas for solders, lithographic ink, how to make a gasoline torch, recipes for killing flies, an experiment with thermit, hand grenades ???, flash-light powder like the old photographers once used, methods to copper-plate carbon motor brushes, and on and on.

A lot of this is quaint, and not directly useful. It's for kitchen chemists of the 1920's. But a few of the formulas and ideas are worth the entire price of the book. If you're trying to build a master reference library of unusual secret formulas, this book is certainly worth considering. Fun reading if nothing else. Get a copy! 5 1/2 x 8 1/2 softcover 160 pages No. 20811



\$8.50

Make Alcohol!

Powerful homemade fuel!

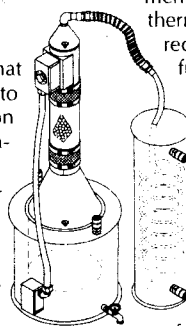
SECRETS OF BUILDING AN ALCOHOL PRODUCING STILL

by Vince Gingery

An intelligent person knows that hoarding gasoline is not a solution to fuel shortages. An intelligent person finds alternative solutions, and this machine is just such a solution.

Instead of trying to stockpile gasoline, you can make your own substitute out of sugar, corn, potatoes, or almost anything you can ferment into alcohol. This still will remove the water, creating almost pure alcohol, nearly 200 proof, so you can burn it in just about any type of engine.

Here Vince will teach you how to take common plumbing parts, copper sheeting, and standard electrical parts and build a 6 gallon capacity still. He'll show you how to malt, mash, and ferment corn into fuel and turn it into fuel. And



Vince will show you how easy it is to get a license and do all this with the blessing of authorities.

The still heats the wash with a water jacket in which is immersed a 120 volt water heater element. Temperature is controlled with a continuous thermostat. Eventually vapors boil through the rectifying column to the condenser. If you carefully maintain the precise temperature, you'll get almost pure alcohol.

The fuel you produce is not going to be cheaper than gasoline unless you have a low cost source of fermentables and want to make a version you can fire with scrap wood or coal. But if you can't buy gasoline at any price, even alcohol at three or four dollars a gallon is a bargain.

I'm sure you could use the still to make whiskey and brandy. But I'll tell you up front, that's against the law whether you sell it or not. The Feds want their taxes. If you're going to make moonshine, don't tell me about it.

Great book! Be independent. Thumb your nose at the corner gas station. Build a still, and make fuel. Order a copy. 8 1/2 x 11 softcover 76 pages No. 6060

\$11.95

Distillation of Alcohol

Incredible 1907 Alcohol Fuel Manual

DISTILLATION OF ALCOHOL AND DE-NATURING

by F. B. Wright

reprinted by Lindsay Publications

You can make industrial alcohol from anything fermentable. Here is one of the very best books you'll ever find on the nitty-gritty details of fermenting grain, fruit, potatoes, and more into a valuable fuel.

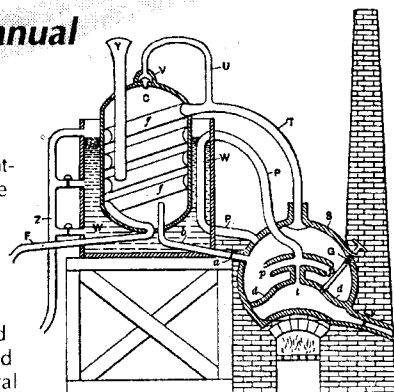
Chapters include alcohol, its forms and sources; preparation of mashes and fermentation; distilling apparatus; modern distilling apparatus; rectification; malting; alcohol from potatoes; alcohol from grain, corn, wheat, rice, and other cereals; alcohol from beets; alcohol from molasses and sugar cane; alcoholometry; distilling plants, their general arrangement and equipment; denatured alcohol, and denaturing formulae; denaturing regulations in the United States (now no doubt obsolete).

You get many, many illustrations of stills, and their equipment. You also get drawings of a potato steamer and crusher, a storage cellar for beets, a roll press for beets, a molasses fermenting house and more. You get recipes and the precise details on mashing.

This is fuel, and engines aren't too fussy about the booze they consume. If your goal is to make whiskey, you're on your own. It's against the law.

Great book! Originally copyrighted in 1907. Loaded with detailed how-to. Tremendous reference and source book for survivalists, farmers, Snuffy-Smith-types, chemistry buffs, and the curious. Good stuff. Get a copy. 5 1/2 x 8 1/2 softcover 271 pages No. 21427

\$14.95



PRACTICAL DISTILLER

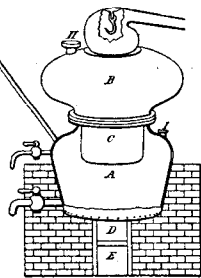
by Leonard Monzert

reprinted by Lindsay Publications

Make moonshine! Poison yourself! Go blind!

From 1889 comes this little gem of a book showing how to distill "Brandy, Gin, Rum, Whiskey, Arrac, Poteen, etc., all of which owe their respective intoxicating properties to the amount of alcohol which they contain."

While other books show you how to make fuel alcohol, this one will show you the equipment you need to make booze. Included are discussions on the still and appurtenances, the farmer's still, directions for erecting a distillery, running a charge, the doubler, distillation of liquors, rectifying or leaching, alcohol refining,

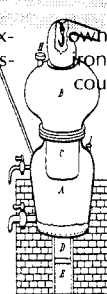


fume, and even vinegar.

If you intend to make booze, you're on your

distillation of volatile oils, extracts, the water bath still, essences and liqueurs, blending and compounding and more.

Making booze without a permit is illegal. The government wants its taxes. You can use the equipment to make fuel alcohol for your car, per-



moonshine. Moonshine stills were made with galvanized iron, old radiators, and other nasty metal that could poison you. Besides, "white lightning" tastes like lightning because it isn't aged or mellowed in barrels. It's nasty stuff. And you'll find little information here on turning out really good whiskey. This is a book on equipment, not gourmet cooking.

A great curiosity. Rare information. I won't tell the WCTU or BATF you're ordering copy.

5 1/2 x 8 1/2 softcover 156 pages

\$8.95

The Scientific American Cyclopedia of Formulas

A total of 15,000 Formulas!

In 1912 Munn & Co. published an enormous book of formulas for almost every imaginable concoction a person might need. Editor Albert A. Hopkins, query editor of the *Scientific American*, compiled this incredible collection 15,000 formulas drawing on, in part, the 28th edition of *Scientific American Cyclopedia of Receipts, Notes and Queries*. The original copyrights run from 1891 through 1910, and the material they cover is brilliant. Order just what you need, or get the whole set.

SET OF ALL NINE VOLUMES

Special price for a set of all nine volumes. Save \$6.95.

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Make grafting wax, grow mushrooms in an old chest of drawers, make butter and its substitutes, simple cheeses, fertilizers, more. Learn about milk and its substitutes, preservation, chickens, their feed, and how to keep livestock healthy.

Discover details on a wide variety of alloys including aluminum bronze, bismuth bronze, copper alloys, German silver, bronze, gun metal, phosphor bronze, speculum metal, bearing metals, brass, gold, manganese, platinum, and silver metals, white metal and more. Great info. 5 1/2 x 8 1/2 softcover 128 pages

No. 21516 \$7.95

VOLUME 2 - ART & ARTIST'S MATERIALS, BEVERAGES

Learn about bronzing, preparing canvas for painting, mixing pigments, making copying paper, drafting, fixing drawings, making wax flowers, bronze drawing on glass, gilding, making modeling clays, molds for metal casting, papier mache, parchment papers, and much more.

Discover formulas for mineral waters, flavorings, extracts, and syrups for making soda pop. Make dandelion root beer, hop beer, egg drinks, Frappes, ginger ales, ice cream beverages, malted milk, and much more. Alcoholic beverages include formulas for all types of liqueurs from genuine (and illegal) absinthe, Berlin bitters, brandy, numerous varieties of wine, and more. 5 1/2 x 8 1/2 softcover 144 pages

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VOLUME 3 - CEMENTS, GLUES, PASTE, CLEANSING, BLEACHING

Make adhesives for aquariums, barrels, buildings, dental work, glass, and more. Make acid proof glues, casein glues, mucilage, putty and much more.

Remove acid stains from clothes, bleach beeswax, clean brass, copper, clocks, carriages, feathers, felt hats, firearms, goatskin rugs, iron, steel,



and more. Unusual stuff to say the least. 5 1/2 x 8 1/2 softcover 161 pages

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VOLUME 4 - PLATING & COLORING METAL

Coloring metals like aluminum, copper, brass, iron and steel and more. Bronze or frost brass, blue steel or turn it bright black, gild silver or turn it red. Make Easter egg dyes, dye feathers, hats, gloves, gutta percha, horsehair, straw and more with dozens of formulas.

Learn to electroplate. Cleaning, pickle, polish and plate. You get many formulas for plating aluminum onto copper, putting down brass and bronze on base metals, plating copper and gold, depositing iron, nickel, platinum, palladium, and more. Learn to blow glass, cut, drill, etch, frost, gild, and grind glass. Excellent info on making mirrors. More. 5 1/2 x 8 1/2 softcover 76 pages

No. 21338 \$5.95

VOLUME 5 - METAL, CANDY, LAPIDARY, LUBRICANTS, ICE CREAM, MORE!

Heat treat metals, anneal, braze, caseharden, harden, temper and weld. Discover formulas for hardening iron with the prussiate of potash process, hardening copper, directions for making drills for glass from steel wire, and much, much more.

Make formulate bird seed, waterproof cellars, compound fumigants, color electric light bulbs, clean and refinish wooden floors, hang wallpaper and more.

Make a variety of chicle-based chewing gums, candies such as gum drops, rose almonds, Italian cream caramels, and more. You get recipes for several ice cream bases and a number of flavoring additives. Make fruit ice, sherbets, and frozen fruits.

Make poisons! ...insecticides and extermination of vermin: domestic, agricultural, and horticultural.

Make jewelry from hard minerals, ivory, bone, horn, shell, coral, jet, meerschaum, soft minerals, etc. Tan leather, preserve it, and polish it. Learn to formulate lubricants. Grease up your buggy wheels, make sewing machine oil, palm oil grease for wooden machinery, and lots more. 5 1/2 x 8 1/2 softcover 113 pages

No. 21435 \$7.95

VOLUME 6 - PAINTS, VARNISH, PHOTOGRAPHY

Formulas for bronzing, driers, enamel paints, fillers, japans and japanning, lacquers, paints, size, stains, varnishes, and more. Make black-

board paint, boiler paint, engine paint, iron paint, rubber paint, silicate paint and more.

Make collodion wet-plates. Formulas for developers, hardeners, fixers, intensifiers, varnishes and more. Make prints using plain salted paper, arrowroot papers, albumen paper, and for making prints on cloth, wood, ivory, etc. You get formulas for making gelatin emulsions, cyanotypes, platinum, carbon, Ozo-brome, lead printing, oxalate silver printing papers, citrate paper, uranium process, and more. Details on color photography, photoengraving, and even old-time flashlight powder 5 1/2 x 8 1/2 softcover 112 pages

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VOLUME 7 - PRESERVING, RUBBER, SOAP, CANDLES, SOLDERING, MORE

Can and preserve blueberries, cherries, crab apples, currants, grapes and more. Make jam, jelly, brandied fruits, pickles, catsups. Pickle melons, bottle horseradish, preserve eggs, meat, smoke eels and salmon. Make mustard, spices, seasonings, sauces, much more.

Details on rubber, gutta percha and celluloid. Make billiard balls(?), imitation tortoiseshell, artificial rubber, rubber preservatives, vulcanizing and much more. Formulas for candles and dozens of different soaps. Discover alloy formulas for all types of solders. More. 5 1/2 x 8 1/2 softcover 101 pages

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Make old time cosmetics, emollient baths, cures for corns, cold creams, depilatories, bleaches and dyes for hair, lip balm, a Listerine-like mouth wash, and more.

Extract and prepare perfumes and colognes from a variety of plants. Make potpourri, smelling salts, pomades, deodorants, rouge, shaving cream, compounds to remove tattoos, theatrical paints, toothpowders and more.

Fireproof tent canvas, roofing, paper and ink, fabrics, wood and much more. Make crayons, a hektograph duplicating machine, blotting paper, aniline inks, inks of various colors, inks for glass, indelible ink, India ink, mimeograph ink, stamp pad ink, and much more.

Discover unusual formulas for extracting albumen, malting grain, making nitric acid, bichromate batteries, benzine, embalming fluids, etching metal, fish bait, foundry facing sand, kerosene, lard, matches, mica, paraffine, plaster, fireworks, and much, much more. Great stuff. 5 1/2 x 8 1/2 softcover 141 pages

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VOLUME 9 - LABORATORY DETAILS

You get explanations, and in some cases illustrations, of laboratory operations in six categories: comminution, solution and extraction, vaporization, precipitation and separation, heat treatment of solids, and specific gravity. These are brief explanations of manipulations needed to compound the thousands formulas in the preceding eight volumes.

Learn about maceration, expression, infusion, evaporating dishes, drying closets, distillation, precipitation, filtration, and much, much more. Well illustrated section. Excellent, practical lab know-how. 5 1/2 x 8 1/2 softcover 100 pages

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• **Division II** — Crude materials and products of chemical industry — Carbonate of Potassa; Saltpeter, Nitrate of Potassa; Nitric acid; Technology of the Explosive Compounds — gunpowder, and the chemistry of fireworks or pyrotechny; Nitroglycerine; Gun-cotton; Common salt; Manufacture of Soda — native soda; Soda from plants or soda-ash; Soda Prepared by Chemical Processes; Preparation of Iodine and Bromine; Sulphur; Sulphurous and Hyposulphurous Acid; Manufacture of Sulphuric Acid; Sulphide of Carbon; Hydrochloric Acid and Glauber's Salt, or Sulphate of Soda; Bleaching Powder and hypochlorites; alkalimetry; Ammonia and ammoniacal salts; Soap making; Boric or boracic acid, and borax; Production of alum, sulphates of alumina, and aluminates; Ultramarine

• **Division III** — Technology of Glass, Ceramic Ware, Gypsum, Lime & Mortar Glass manufacture; Ceramic or earthenware manufacture including hard porcelain, tender porcelain, stoneware, Fayence ware, common pottery, brick and tile making; Lime and lime-burning; Mortar including common or air-setting mortar and hydraulic mortar; gypsum and its preparation

• **Division IV** — Vegetable Fibers and Their Technical Application — Hemp; Cotton; Paper making — hand paper, machine paper, pasteboard and other paper; Starch; Sugar manufacture; Cane Sugar; Beet-root; sugar; Grape sugar; Fermentation; Wine-making; Beer-brewing; preparation or distillation of spirits — preparation of vinous mash and distillation of the vinous mash; Bread baking; Manufacture of vinegar; Preservation of wood; Tobacco; Technology of essential oils and resins; Cements, lutes and putty

• **Division V** — Animal Substances and Their Industrial Application — Woollen industry; Silk; Tanning; Glue Boiling; Manufacture of Phosphorus; Requisites for producing fire; Animal charcoal; Milk; Meat

• **Division VI** — Dyeing and Calico Printing — Aniline colours; Carboic Acid colours; Naphthaline pigments; Anthracen pigments; Pigments from Chinchonine; Red Pigments occurring in plants and animals; Blue dye materials; Yellow dyes; Bleaching; Dyeing of spun yarn and woven textile fabrics; Printing of woven fabrics

• **Division VII** — Materials and Apparatus for Producing Artificial Light — Artificial light from candles; Illumination by means of lamps; Gas; Paraffin and solar or petroleum oils; petroleum

• **Division VIII** — Fuel and Heating Apparatus — Fuel; Wood; Peat; Carbonized peat; Brown-coal; Pit coal or coal; Petroleum as fuel; coke; artificial fuel; gaseous fuel; heating apparatus; heating dwelling houses; boiler heating and consumption of smoke

Chemical Manufacturing Secrets

1872 Handbook!

Everything from pig iron and nitric acid to bread and wine!

HANDBOOK OF CHEMICAL TECHNOLOGY 1872

by Rudolf Wagner
translated by William Crookes
reprinted by Lindsay Publications

In the 1872 German chemists were world famous, and Wagner's Handbook was the master reference for chemists the world over. This translation of the eighth German edition can be yours for much less than an original copy should you be able to find one.

And what a book it is!

You'll early and/or simple ways of making chemicals, refining metal, formulating glue, paper, dyes or just about anything else chemical in nature. I have never seen such a comprehensive collection of incredible technological detail in a single volume anywhere else.

Want to refine iron ore into steel? Want to make sulphuric acid? And use it to make nitric acid? And use it to make explosives? Care to brew beer?

How about a batch of whiskey? A loaf of bread? And on, and on, and on. You get a whole encyclopedia in a single volume — 745 pages of small type with 336 illustrations mostly of manufacturing apparatus.

This is not really a cookbook. You won't find step-by-step instructions. But you will find more detail on a wider variety of basic essential processes (many of them made obsolete by more complicated processes) than in

any other volume. For instance, if you're investigating the tanning of hides, making illuminating gas, charcoal, soap, or anything else, you'll find that this single volume can provide more information in less time than a search through most libraries for a month of Sundays.

Yes, this is an expensive volume, but you actually get more than what you pay for. This is quality. Today we have sophisticated, hi-tech processes that are closely guarded industrial secrets. Here you learn how it was done before large corporations and PhD chemists took over production. Be warned, though. This is old world thinking. You run the risk of poisoning yourself. These methods can be and probably are dangerous.

This incredible classic text will definitely fill a void in your reference library. I've never seen anything like it. And it's almost a sure thing you haven't either. It's expensive, but it's worth every penny and then some. Order a copy. You won't be disappointed. 5 1/2 x 8 1/2 hardcover 745 pages 332 illustrations No. 4996

\$29.95



FIG. 265.

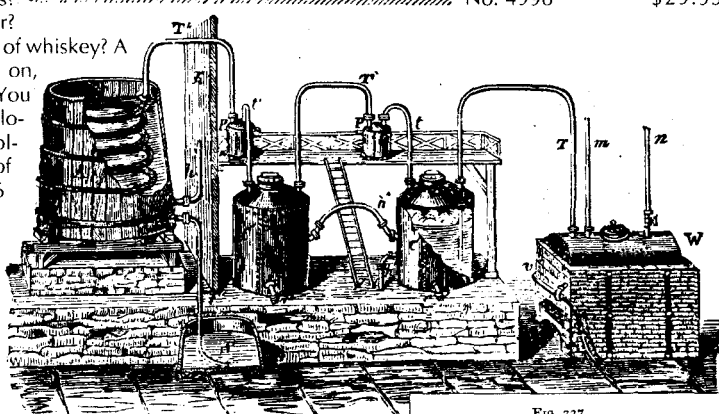
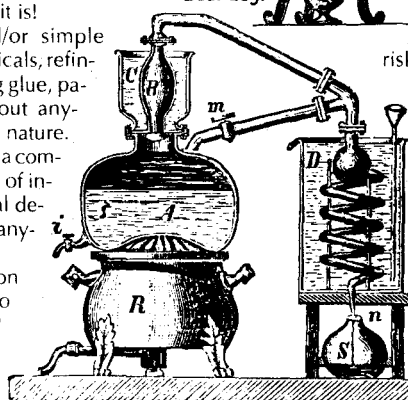
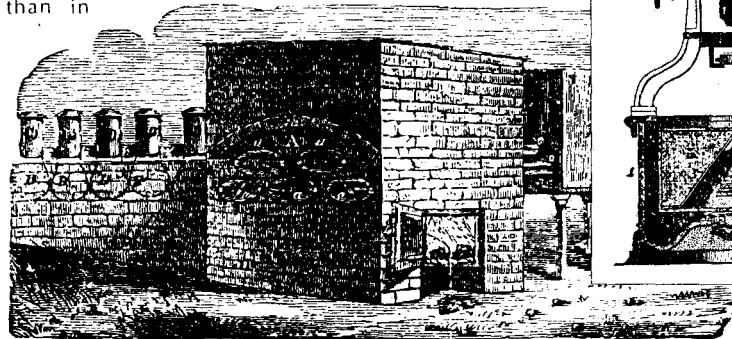


FIG. 227.



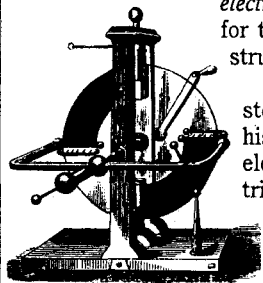
Magnetism & Electricity

ELEMENTS OF MAGNETISM AND ELECTRICITY

by John Angell

reprinted by Lindsay Publications

Half of this beautifully illustrated 1892 British textbook covers static electricity equipment including "practical instructions for the performance of experiments, and the construction of cheap apparatus."



Chapters include natural magnets or lodestones, artificial magnets, terrestrial magnets, history of frictional electricity, electroscopes and electrometers, electrical induction, frictional electrical machines, distribution and tension of electricity, the Leyden jar, and experiments. The last two chapters deal with voltaic or current electricity and its use in electroplating, the telegraph, induced currents, magneto-electricity and thermo-electricity.

Build yourself a high-voltage machine, charge up Aepinus's condenser, and use the charge to create electrical hail inside a bell jar, or take an electrical portrait. Try Faraday's ice pail experiment.

A great little book loaded with hard-to-find information. Fun reading. Great ideas for static electricity fanatics. Great engravings. Order a copy, and get started! 4x7 softcover 264 pages
No. 20862

\$8.95

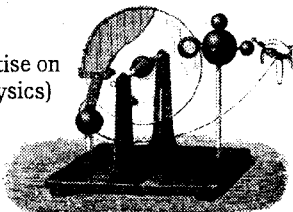
Deschanel's Static Electricity Text

DESCHANDEL'S STATIC ELECTRICITY

by A. Privat Deschanel

reprinted by Lindsay Publications Inc

In 1884 Deschanel's "Elementary Treatise on Natural Philosophy" (what we now call physics) was translated from French and published in the U.S. as a series of four volumes. Here you get just those chapters dealing with static electricity.



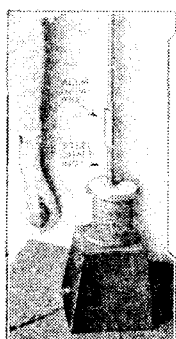
You get chapters from an translated 1884 French physics text covering static electricity. Besides basic theory you'll see Nairne's machine, an unusual variety of Winter's machine, Armstrong's Hydro-electric machine, Holtz's machine, and Bertsch's machine. Just a few of other experiments shown and described are discharge in Torricellian vacuum, the electric egg, the spangled globe, the electric mortar, Leyden jars, the condenser of Aepinus, and the condensing electroscope. You'll see rare and unusual views of the complex portable electrometer, the quadrant electrometer, and many others.

A detailed textbook. Great illustrations, excellent text, and even math to back up the theory. Yes, much of this information is available in other books, but you're sure to get many new ideas. Great research reference. You'll like it. Get a copy! 5 1/2 x 8 1/2 softcover 112 pages
No. 20722

\$7.95

ELECTRIC CANNON PLANS AND MORE!

- Build this electromagnetic cannon that "shoots" aluminum projectiles.
- Just one of many projects in *Radio Builders' Manual* described elsewhere in this catalog



EXPLODING WIRES!

EXPLODING WIRES; PRINCIPLES, APPARATUS AND EXPERIMENTS

by Steve Hansen

Exploding wires and foil go back hundreds of years. Even wild-man Ben Franklin blew things up with powerful jolts of electricity.

It must have been really spectacular at parties!

When you think about it, this is really a misapplied spotwelder of sorts. Essentially, you dump a vast amount of electrical energy through a thin wire in a very short time. The enormous current generates searing heat, melts and vaporizes the metal, generates a blinding flash, and liberates a



sonic shock wave (guaranteed to scare the neighbors).

In this slim but well-written and well-illustrated booklet you get everything you need to know to pull off one of the more bizarre science stunts around. You get the basic history and theory, analysis of the DC charging circuit that loads up storage capacitors, discussion of discharge and control circuits, and experiments. You also get several possible sources for the unusual components.

What good is it? What good is a Tesla coil? It's for fun. Explode wires! This is a necessary course if you ever hope to get your Mad Scientist Degree. Get a copy. Very unusual information. Well done. Worth having. 8 1/2 x 11 booklet 11 jam packed pages
No. 3006

\$7.95

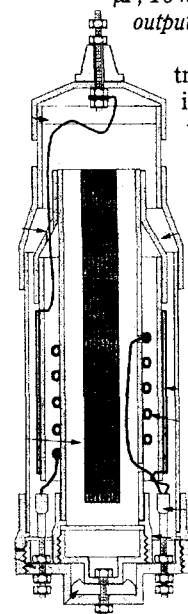
250,000 VOLTS!

CONSTRUCTION OF A QUARTER MILLION VOLT IMPULSE TRANSFORMER

by Steve Hansen

Generate short duration electrical pulses in excess of 100 kV!

"The impulse transformer that is described here is powered by a 4.4 μ F, 10 kV capacitor. With a turns ratio of 36:1, the no-load output is in excess of 300 kV..."



Like a Tesla coil, the wiring diagram for a pulse transformer is ridiculously simple. The secrets lie in construction details. Hansen will show you how to build this impressive device using PVC, copper tubing, a laminated iron core and other common materials. He'll show you the high voltage power supply similar to transmitter supplies traditionally described in the "Radio Amateur's Handbook".

This beast will produce sparks only about 8" long due to its operating characteristics. If you want long sparks, go with a 300 kV Tesla coil. But don't even think of yourself as an expert in high voltage unless you're familiar this type of lightning bolt generator.

There are only a few pages to this report, but when you see the quality of the content and the beautifully drawn diagrams, you'll realize that this information is quite reasonably priced. This is a jam-packed report with proven how-to. Reprinted from Hansen's newsletter "The Bell Jar". Worth having. Get a copy. 8 1/2 x 11 pamphlet 10 pages
No. 3017

\$7.95

VACUUM TECHNOLOGY!

AN EXPERIMENTER'S INTRODUCTION TO VACUUM TECHNOLOGY

by Steve Hansen

Get started in the world of vacuum.

Take a refrigerator compressor and turn it into a vacuum pump. Build a glow discharge tube powered by a high voltage supply built from a modified TV flyback transformer. Make thermocouple gauges with op-amp controllers. Learn how to seal up equipment with o-rings, compression fittings, nylon washers, and more. Build a replica of a very early cathode ray tube, the Braun tube. Build a cold cathode CRT. Build a radiometer. Build a plasma sphere — one of those spheres with the dancing colored electric arcs that change when you bring your hand near. And you can always re-enact the famous Magdeburg sphere experiment of the 1600's.

Chapters include means of producing vacuum, vacuum technology, materials, vacuum applications and pressure ranges, low cost mechanical pumps, simple gauges, useful flanges and connectors, a simple vacuum workstation, a manifold for gaseous discharge and electron beam experiments, experiments with glow discharge produced electron beams, the radiometer, a plasma sphere, Magdeburg hemispheres, along with lists of suppliers and references.

These are reprinted articles from Hansen's newsletter "The Bell Jar". Each is clearly explained, illustrated, and is proven how-to using modern materials. Everything here is meat. No fluff. Worth having. Get a copy. 8 1/2 x 11 booklet 39 pages
No. 3018 \$14.95

SPACE AGE PROJECTS

BUILD YOUR OWN WORKING FIBER OPTIC, INFRARED AND LASER SPACE-AGE PROJECTS

by Robert E. Iannini

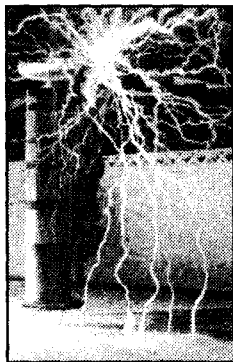
From the back cover:

"Here, you'll find plans for such fascinating devices as a high sensitivity laser light detector... a high voltage laboratory generator that's useful in all sorts of laser, plasma ion, and particle applications as well as for lightning displays and special effects... a solid-state gallium arsenide injection laser system capable of producing 4- to 30-watt peak power infrared pulses at 200 to 2500 pulses per second... an infrared viewer that has functions ranging from nighttime surveillance to viewing IR laser beams..."

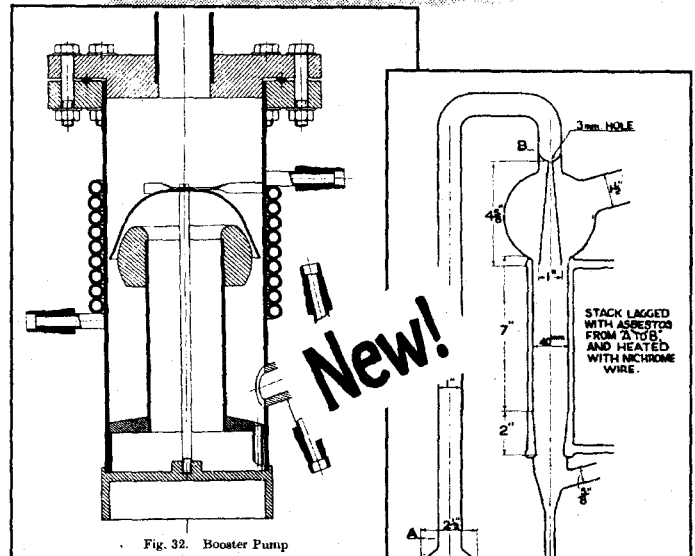
You get fourteen different projects, twelve of them being laser devices. But even chapter fourteen oughta fire ya up! He'll show you how to build a DC power supply capable of delivering microamps of current at voltages adjustable from 35,000 to 250,000 volts! And it is not a Tesla coil.

You get schematics, diagrams, step-by-step how-to, safety precautions and more. Get a copy of this, build yourself a laser and a lightning bolt generator. Strange, hi-tech stuff. Go for it! 7 1/2 x 9 softcover 262 pages
No. 393

\$19.95



VACUUM PRACTICE



A MANUAL OF VACUUM PRACTICE

by Martin and Hill

reprinted by Lindsay Publications

"This manual was prepared primarily to assist post-graduate students in the first years of their research.... We have endeavored to present aspects of vacuum technique which will assist the research beginner... This manual does not pretend to cover the whole field of vacuum technique, but rather to present modern developments in a concise and practical form. More comprehensive treatments are to be found in the classic texts of Strong, and Espe and Knoll...." Strong. As in Experimental Physics. As in this catalog.

This beautiful little book was printed in 1947 in Australia. We could find no copyright claims in it, and I hope I'm stepping on someone's toes by reprinting it. But it's too good to ignore.

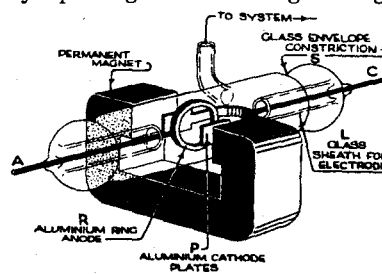


Fig. 13. Penning Gauge

backing pump, mercury diffusion pump, motion transmission seals, vapour traps and raffles, and more.

It's just like it says. This a nuts-and-bolts hardware guide for the guy who needs to make high vacuum in order to build other devices. Like light bulbs? Vacuum tubes? X-ray tubes? Great World War II technology. Get a copy. Good reading. 5 1/2 x 8 1/2 paperback 120 pages
No. 21885

After May 31, 1997

\$9.95
\$11.95

Beautifully illustrated chapters include: principles of production of low pressures, measure of pressure, pumps, and vacuum plumbing. Within each chapter a discussions of such devices as the Pirani gauge, the Penning gauge, the ionization gauge, oil diffusion pump,

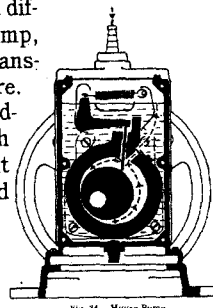


Fig. 34. Hyvac Pump

Make, Use, and Repair **induction Coils!**

INDUCTION COILS

HOW TO MAKE, USE AND REPAIR THEM

by *H S Norrie*

reprinted by *Lindsay Publications Inc*

You get information, some of it quite unique, on Ruhmkorff coils, oil immersed coils, a disruptive Tesla coil, medical coil with interchangeable secondaries, mercury vibrators, Wehnelt interrupter, adjustable cone vibrator, insulating compounds, Leyden Jar construction, glass plate condensers, adjustable condensers, experiments with luminous effects, use of the spectroscope with coils, different forms of mercury air pumps, Geissler tubes, effects of discharges in rotating tubes, application of the Ruhmkorff coil for lighting gas, and more.

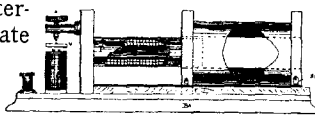
Chapters include Coil Construction, Contact Breakers, Insulations and Cements, Condensers, Experiments, Spectrum Analysis,

Currents in Vacuo, Rotating Effects, Gas Lighting, Batteries for Coils, Storage or Secondary Cell, Tesla and Hertz Effects, the "Roentgen" Rays and Radiography, and Wireless Telegraphy.

You'll learn how to build both primary and storage batteries. Investigate the "Tesla" effects, ways of generating X-Rays (very dangerous), and much more.

If it has any fault, it's that the author has tried to cover too much material in too small a book. You'll find 79 simple, but informative drawings, and 8 tables. A 1907 4th edition of the 1896 original. Early and rare! Worth having. 4 1/2 x 6 softcover 288 pages No. 20510

\$9.95



SCARE YOUR NEIGHBORS HALF TO DEATH!

THE CONSTRUCTION OF LARGE INDUCTION COILS A WORKSHOP MANUAL

by *A. T. Hare*

reprinted by *Lindsay Publications*

Induction coils produce powerful lightning bolts. Many articles and plans I've seen for "Tesla Coils" are actually induction coils, coils that are really not as good as the machines described in this 1900 book.

Build a big coil! One with a core 18" long that is almost 1 3/4" in diameter and weighs almost eight pounds. The secondary is made up of over 79,000 turns of very fine wire weighing 19 pounds and being almost 17 miles in length!

Chapters include: the core, the primary coil, the main insulating tube, the condenser,

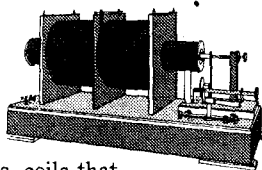
the commutator, the break, the secondary coil, the winding, mounting the discs, outer insulation, covering and finishing, hand breaks, electrolytic breaks and more.

You get 35 drawings showing everything from the general layout of components to the procedure of applying insulation to the main tube. You'll learn how to build the capacitor, how to build and adjust the break, and even how to build a unique machine to coat wire with paraffin to improve its insulating qualities.

If you build this monster and fire it up! Scare your neighbors half to death! Excellent book. Get one. 5 1/2 x 8 1/2 softcover 155 pages

No. 20897

\$9.95



Build a Powerful **INDUCTION COIL!**

THE DESIGN & CONSTRUCTION OF INDUCTION COILS

by *A. Frederick Collins*

From 1908, you get one of the best books I've ever seen on coil construction. "The present work treats of eight different sizes of coils, varying from one giving 1/2-inch sparks to a large one giving 12-inch sparks...."

Twenty chapters delve into the theory of the coil and the action of each of its components, design of spark coil cores, choosing interrupters, details of condenser design and size, and more. Wire is discussed along with its cutting, straightening, annealing, the making of the paper tube, bundling and taping wires for large cores, and more.

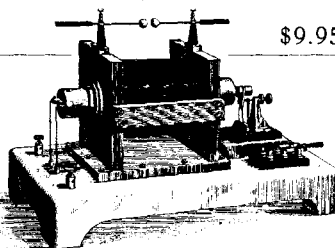
Detailed discussions reveal the advantages

of silk versus cotton-covered magnet wire, winding the primary, the winding of helical secondaries, construction of aperture insulating rings, how to dip the coil and bake it, build a vacuum apparatus to impregnate the apparatus, machine the parts for a simple spring interrupter, and much more. You get wiring diagrams for various coils, final assembly details, sources of direct current including dry cells, plunge batteries, chloride accumulators, and more.

Great book! Build a coil! Create lightning! Highly recommended! 5 1/2 x 8 1/2 softcover 272 pages - well illustrated

No. 20404

\$12.95



HOW TO BUILD A 40,000 VOLT INDUCTION COIL

by *Walt Noon*

Are you looking for a fast and simple way to generate high voltage? Try this.

The ignition coil in your automobile is the modern equivalent of an old time induction coil. It is nothing more than a transformer that converts low voltage into very high voltage. The points in your automobile replace the old fashioned spark gap.

Build a 40,000 Volt induction Coil!

Walt Noon's circuit here replaces the spark gap and the points with a low cost solid state circuit centered around a 555 timer IC. The circuit takes 110 VAC out of your wall and converts it into a string of DC pulses. The pulses are sent to the terminals of an auto ignition coil that you can steal off a policecar. Off the high voltage terminal comes a solid 40,000 volts that can be used for a variety of experiments including plasma globes and Kirlian photography.

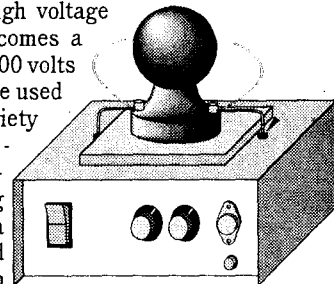
You get drawings of the unit, parts list, circuit diagram, photos and assembly instructions for the coil. You are expected to have at least some experience building modern electronic equipment with perf board. You get hints, tips and suggestions on where and how to make circuit modifications. You also get eight different experiments plus extensive details on Kirlian photography with a modified 35mm camera.

Get a copy of this and shock the pants off your friends. They will be amazed. Good stuff. Well written and to the point. Get a copy.

5 1/2 x 8 1/2 booklet 24 pages

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Dear Mr Lindsay:

I don't know how you do it, I received your catalog one week after I sent out my request for it. I was amazed at the selection of books that you offer, all at very reasonable prices. The low shipping costs had me worried for a while. I assumed, since many places charge \$4.95 shipping and handling for a book that takes six to eight weeks to arrive, that books from you would take at least that long and arrive to me in poor condition. I was completely wrong. Less than a week after I sent out the order form for my first set of books from you, they were in my hands in perfect condition. I will never underestimate you or your company again. Keep up the good work.

Nick Pandisco, Hopkinton MA

Electricity at High Pressures & Frequencies

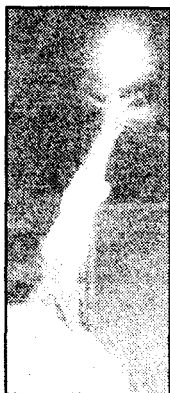
ELECTRICITY AT HIGH PRESSURES & FREQUENCIES

by Henry L. Transtrom

reprinted by Lindsay Publications

The entire first part of this book covers electrical theory, just practical stuff that builders can use, great material for the builder of lightning bolt generators.

You won't find all that much construction how-to, but you WILL find details about existing equipment, how it works, simple calculations on performance, and some remarkable photographs of experiments that can be performed with a lightning bolt generator.



Chapter 13 on page 165 talks about the fact that Tesla, Fessenden and others have not been able to generate frequencies over 100,000 Hertz (cycles per second). Then they show you a Fessenden alternator driven by a 10 hp DC motor through gears that revolves at 20,000 rpm that kicks out over 2,000 watts of high-frequency high voltage!

You'll see a device that develops 15,000 volts between two ends of 25 feet of No. 4 aluminum wire! Another photo shows a 10 volt 5 watt Mazda lamp is lit to full brightness



although apparently short circuited by 6 inches of No. 00 copper wire! It shouldn't work, but it does. You'll see a high-frequency transformer that throws heavy 60" sparks between its terminals. Other photos show unusual high voltage experiments. The last 20% of this book is worth the price of the entire book!

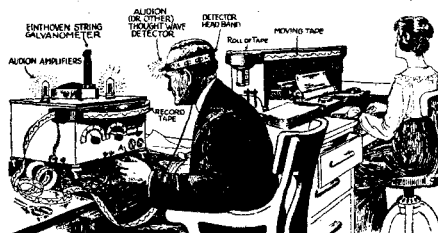
A 1921 edition of the 1913 original. There appear to be 139 illustrations. This is another must have for the high-voltage library — a book that is very difficult to find. Get yourself a copy. You'll like it. Excellent book! 5x7 softcover 264 pages No. 20544 \$11.95

STRANGE STORIES from Electrical Experimenter Magazine

Strange Stories from ELECTRICAL EXPERIMENTER MAGAZINE

reprinted by Lindsay Publications

Unusual stories from Electrical Experimenter 1917-1919, mostly dealing with Tesla. Strange stories on gravitation and electricity; can electricity destroy gravitation; a novel Tesla steam electric clock; electrical produc-



tion of synthetic gasoline; Tesla's egg of Columbus; My Inventions—the discovery of the Tesla coil and transformer (by the man himself!); the thought recorder; the true wireless (by Tesla); and home treatment of tuberculosis by high frequency currents.

Professor Nipher describes in detail his experiments linking electricity and gravity. Check out Gernsback's ECG machine?? Or you can try to cure your TB with a Tesla coil, but

I think I'll stick with antibiotics, thank you. And much more.

You get all the text, illustrations, and captions in one inexpensive book. If you're into offbeat, fringe science, maybe you'll find a new mystery to explore. Fun stuff. Get a copy. 5 1/2 x 8 1/2 softcover 64 pages No. 21613 \$6.95

EXTRACT Free Electricity from the Ground!

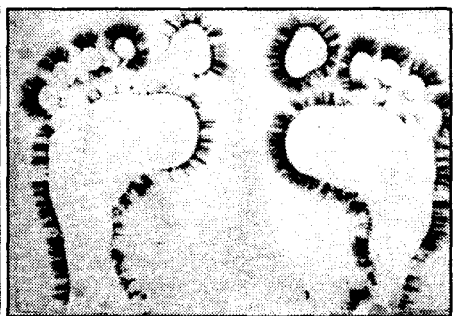
One radio described in *Xtal Set Society Newsletters Vol V* (described elsewhere in this catalog) is powered by free energy extracted from the ground. Check it out! It really works.

THE UNSEEN SELF KIRLIAN PHOTOGRAPHY EXPLAINED

by Brian Snellgrove

"Most of us think of the aura as a halo of light surrounding the heads of saints. The reality is that everyone has an aura. Auras have two main purposes: to form a protective layer around us, and to act as a transmitting and receiving state for thoughts and emotions.

Thoughts are living things which radiate from us 24 hours a day. Kirlian photography is a fascinating new tool that enables us to see, in

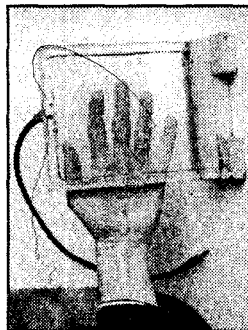


BIZARRE KIRLIAN PHOTOGRAPHY!

graphic form, how this mysterious electric layer varies from person to person.

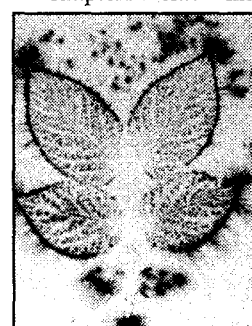
The book concludes with practical tests that anyone can do to show the reality of this old — yet only partly understood — phenomenon."

Now I don't really buy this guy's explanation of aura. I mean this guy has spent the last 25 years as a "healer". But whether you want to believe it or not, Kirlian photographs exist and are something you can do with high voltage that is quite interesting. Although I'm convinced these "aura's" are little more than grains of dye-sensitized silver halides being ionized by intense electric field gradients, you might want to believe they are something far



more mystical. That's your business.

Chapters include: historical aspects of the



human energy field, the mysterious phenomenon of Kirlian photography, what is the Kirlian apparatus and how does it work?, Kirlian photography in use, navigating the minefield, into the unknown — the body electric, future directions — the nature

of reality.

Great interesting photos. Flakey, but interesting. If you're into this kind of fringe science, you should consider this. Expensive, but very unusual material. Think about it. Published in England.

5 1/2 x 8 1/2 paperback 130 pages No. 790

\$15.95

THE COMPLETE INVENTIONS & WRITINGS OF

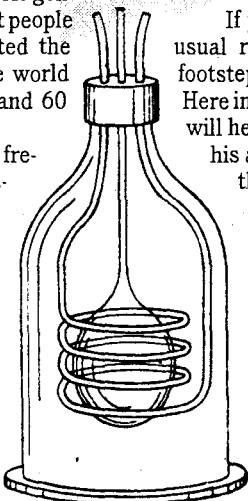
INVENTIONS, RESEARCHES &
WRITINGS OF NIKOLA TESLA

by Thomas Commerford Martin
reprinted by Lindsay Publications Inc

Most people think of lightning bolt generators when they think of Tesla, but people should remember that Tesla created the power system used throughout the world today — one that operates at 50 and 60 cycles per second.

Tesla experimented with other frequencies, iron and air core transformers, as well as motors and generators. Tesla didn't just one day decide he was going to build his famous lightning bolt generator. It was but another step in a series of experiments that had begun years before. Here you get a complete record of his research up to 1893.

It's all here — the AC experiments and inventions that lead Tesla to experiment with ever higher voltages and frequencies, the neon tubes and florescent lights, unusual high frequency alternators and even magnet motors.



Nikola Tesla

A Rare, Classic Text!

If you want to carry on Tesla's unusual research, you must walk in his footsteps. You must do your homework. Here in one volume is the early work that will help you get your mind in sync with his and perhaps suggest what he was thinking at the time, and give you ideas of where to take his experiments.

Every Tesla fan, every high voltage experimenter, and every electrical engineer should have a copy of this classic book. Just as much as Edison, Tesla created the world in which we live today. Now you can study the results of his research, attend his special exhibitions, and devour his lectures, with this single volume.

Order a copy today! 5 1/2 x 8 1/2 softcover 496 pages
No. 4902 \$18.95

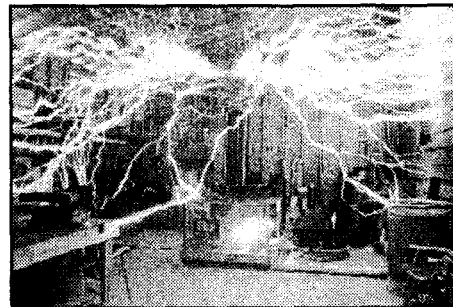
Tesla's Notes! A Builder's Guide

Tesla Coil Builder's Guide to the
COLORADO SPRINGS NOTES
OF NIKOLA TESLA

by Richard Hull

Tesla's notes of his 1899-1900 experiments in Colorado were published in English sixteen years ago in Yugoslavia. Readers had a difficult time understanding them. This book is a guide through those notes, and better yet, a translation. Even without the original notes, much useable information is provided by Hull.

You get loads of detail.



July 24, 1899— "...[Tesla] calculates that the system is oscillating at 164 kHz and then places a 30 inch sphere on the extra coil and records the usual drop in extra coil resonance to 102 kHz with a near tripling of primary capacitance needed to retune the system..." (only part of several large paragraphs)

July 27, 1899— "...Tesla realizes that he can measurably shorten his dwell time and make quenching action much more efficient if he adopts external series spark gaps to help exhaust the arc rather than letting the rotary do all the work...." (much more)

October 3, 1899— "...Tesla's secondary appears to have been slightly altered still. He is now using 17 turns. The first 14 turns are fully double spaced and he then takes two turn triple space or 4 inches apart and the final turn on the insulators is a full 22 1/2 inches above the uppermost turn within the wooden form..." (on and on and on)

You get specifications of the final system design which was used less than fifteen days. Make no mistake about it. This is a BIG system kicking out arcs over thirty one FEET long! You get details on Tesla's Colorado Springs lab and lots more.

You get a list of other publications, newsletters, videos, and a collection of absolutely impressive photos of giant coils being built and operated by the Tesla Coil Builders of Richmond. Good stuff. It will push you into new frontiers of study and research. Get started. Order a copy. 8 1/2 x 11 plastic spiral binding about 120 to 130 pages

No. 3016 \$24.95

GREAT TSLA BIOGRAPHIES

TESLA: MAN OUT OF TIME

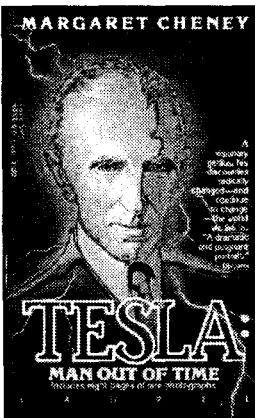
by Margaret Cheney

"Flamboyant, eccentric, almost supernaturally gifted, had he been born today he would still be ahead of his time. Called a madman by some, a genius by others, and an enigma by nearly everyone, Nikola Tesla was perhaps the greatest inventor the world has ever known..."

"It was Tesla who harnessed the alternating electrical current that we use today... Tesla who actually invented radio... Tesla who invented fluorescent lighting and the incredible bladeless turbine. He introduced us to the fundamentals of robotry and computer and missile science, which continued to create and transform the future..."

There are many books about Tesla, some of them are garbage written by groupies who worship Tesla as a god. Here's a great factual biography that has gotten great reviews — the story of a wizard who was Edison's enemy, Mark Twain's friend, and J. P. Morgan's client. This is the real story. Excellent book at a reasonable price. Order a copy. 310 pages "mass" paperback a few photos

No. 717 \$6.50



PRODIGAL GENIUS

The Life of Nikola Tesla

by John J. O'Neill

"Spectacular as all his inventions seemed, they were only offshoots of his truly monumental discoveries in the basic principles of electricity. Today, dozens of his patents are in use in his adopted country, America, while in his native Serbia he is revered as a national hero.

His brilliant, eccentric personality gives to Tesla's life story the quality of the strangest romance. He made his first million dollars before he was forty, yet gave up the royalties on his most profitable inventions as a gesture of friendship, and died almost in poverty. Handsome, magnetic and elegant, he was the 'catch' of New York society, yet no woman could win him from his dedication to science. He refused to accept the Nobel Prize; and when others claimed credit for the revolutionary ideas his extraordinary mind threw forth like showers of sparks, he did not contest them.

In this penetrating study of the life and mind of scientific superman, Nikola Tesla is revealed as a figure of genius who influence upon the world around us is incalculable, and whose shadow stretches far into the future."

This is a newly-typeset reprint of the classic biography of Tesla. Every Tesla library should have a copy of this. No ands, ifs or buts. And the price is quite reasonable. Get one! 5 1/2 x 8 1/2 softcover 329 pages

No. 775 \$12.99

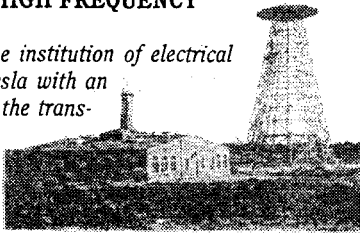
Tesla's Experiments

Power transmission without wires: the London Lecture plus a 1904 magazine article on the Colorado Springs experiments!

EXPERIMENTS WITH ALTERNATE CURRENTS OF HIGH POTENTIAL AND HIGH FREQUENCY

by Nikola Tesla

"A lecture delivered before the institution of electrical engineers, London, by Nikola Tesla with an appendix by the same author on the transmission of electric energy without wire, reviewing his recent work, and presenting illustrations from the photographs never before published."



It's all here, every page from the original 1904 book — complete with unusual illustrations showing disruptive discharge coils, improved discharger and magnet, luminous discs, single wire and no wire motor, unusual electric lights for use with the high-frequency AC that is generated by the Tesla coil, and much more.

Quite a title! Quite a book! The inventor himself explains his experiments, theories, and plans.

The last fourteen pages of the book is a reprint of Tesla's article from the March 5, 1904 issue of "Electrical World and Engineer" complete with photographs of the experimental apparatus at Colorado Springs and Long Island built to test the transmission of electrical power without wires.

Anyone who studies Tesla, builds his coils, or wants to perfect the inventions that Tesla didn't have time to finish should have a copy of this book. Rare! Interesting! Historically important! Get a copy! 5 1/2 x 8 1/2 softcover 170 pages.

No. 4392

\$9.95

Radio Tesla

SEND POWER THROUGH AIR!

RADIO TESLA - THE SECRET OF TESLA'S RADIO AND WIRELESS POWER

by George Trinkaus

Here's another in the series of informative booklets put out by George Trinkaus.

Wireless transmission of power is really no mystery. It's the whole premise upon which radio works. Tesla was one of the inventors of radio.

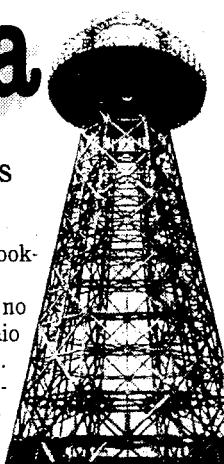
Trinkaus walks you through Tesla's experiments and inventions and shows you the connection with radio. The author will show you his experimental spark-gap transmitter (which can get you into real trouble with the FCC), a push-pull tube transmitter, and more.

You'll investigate low-frequency transmission (VLF), transmission through the ground, and more. You'll get details on Tesla's radio control boat, later regenerative receivers, modern publications that explore license-free VLF transmission and reception, aerial capacity and more much.

You get a load of fascinating information in a small, low-cost booklet. Just the references to other publications, in itself, makes this publication worth having. For instance, I've had a lot of fun exploring the mysterious VLF wave-lengths, and you can, too. This publication can point you in the right direction.

Get a copy. Interesting. 7 x 8 1/2 stapled booklet
No. 3004

\$6.50



TESLA TURBINE SECRETS!

TESLA'S ENGINES

A NEW DIMENSION FOR POWER

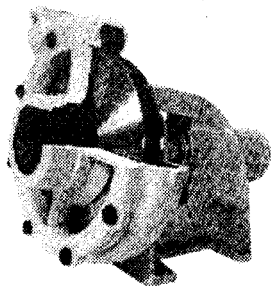
compiled by Jeffrey A Hayes

In 1909 Nikola Tesla applied for a patent on his bladeless steam turbine that could generate ten horsepower per pound of weight. Actually, the patent granted in 1913 was entitled "Fluid Propulsion" because the turbine could also be used as an efficient pump. The patents have expired, and yet the invention is not being used. Why? Could it have been all that great? Find out.

Here you get a collection of articles on the turbine/pump. Chapters include Tesla Gasoline Engine, Sea Power Plant Designed by Tesla, Tesla's New Fluid Propulsion, A Revolution for Electric Motors, New Inventions by Tesla, The Tesla Turbine (articles from Pop Mechanics, Boys Book of New Inventions, Prodigal Genius, others), and more.

You get many photos of applications, reproductions of the original patent plus related patents, info on the Tesla Engine Builders Assoc and more. This is an offbeat, quality book on an unusual topic. Get a copy. 5 1/2 x 8 1/2 softcover about 224 pages
No. 1307

\$19.95



Tesla's Lost inventions

TESLA: THE LOST INVENTIONS

by George Trinkaus

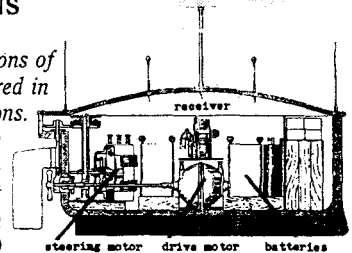
"Here are the suppressed inventions of Nikola Tesla all in one place rendered in clear English and in 42 illustrations.

Tesla was famous at the turn of the century for inventing the alternating-current system still in use today. But his later inventions, documented in some 30 U.S. patents between 1890 and 1921, have never been utilized as Tesla intended despite their obvious potential for advancing in fundamental ways the technology of modern civilization. Among these lost inventions: the disk-turbine rotary engine, the tesla-coil electric energy magnifier, high-frequency lighting systems, the magnifying transmitter, wireless power, and the free-energy receiver." —from the front cover.

Like Trinkaus's other Tesla book, the only criticism that can be leveled here is that the chapters are too short. Interesting, unusual information, especially if you're just beginning your study of Tesla. Fairly priced. 8 1/2 x 7 booklet 34 pages

No. 748

\$5.95



TESLA COIL

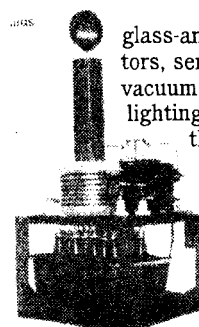
by George Trinkaus

You get a brief overview of Tesla, his career and his coil. Then you get instructions on building a good sized coil using a neon transformer and a spark gap to drive the primary. The detail is adequate.

You get brief discussions and details on capacitors, glass-and-foil capacitors, oil capacitors, salt-water capacitors, series and rotary spark gaps, a schematic for a 6L6 vacuum tube driven coil, construction notes, hazards, Tesla lighting, ozone disinfectant, and magnifying transmitter. All this in 21 pages!

Obviously, the booklet does not go into great detail, but there ARE ideas and clues here that you might not have thought of yet. A lot of the info is a repeat from other books, but there are some bits and pieces that I haven't seen. Consider it carefully. 7 x 8 1/2 booklet 21 pages
Cat. no. 741

\$4.95



TESLA COIL PLANS

Tesla High Frequency Coil

THE TESLA HIGH FREQUENCY COIL

Its Construction and Use

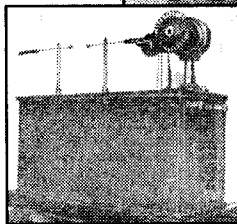
by Haller & Cunningham

reprinted by Lindsay Publications

A very rare 1910 Tesla coil construction book for beginners. Fool-proof plans for two coils to produce 3" and 7" arcs. Chapters include general survey, the transformer, the condenser, the oscillation transformer, the interrupter, the construction of the boxes, assembling, theory of the coil, uses of the coil and dimensions of 7" standard coil.

You build your power transformer to convert 110 volts to 10,000 volts, a monster condenser from 10"x 12" sheets of glass and

RARE!



brass dipped in paraffin, and a secondary is 8" in diameter and 17" in length. Covered are simple air gaps, magnetic interrupters, and motor-driven gaps.

This is a gem not only because it is how-to but because it is so rare. Essential Tesla. Order a copy. 5 1/2 x 8 1/2 softcover 119 pages No. 21567 \$8.95

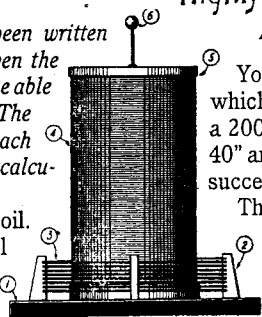
Tesla Coil Design Program

THE TESLA COIL DESIGNER

by Walt Noon

"The Tesla Coil Designer has been written specifically to allow anyone with even the simplest knowledge of electronics to be able to design their own Tesla coil... The program has been written so that each component... can be individually calculated..."

Fire up your PC and design a coil. Walt Noon, the mad scientist, will provide you with a quality design program that offers more sophisticated design features than programs offered at twice the price.



Highly Accurate • Tested out to 40" arcs! • Easy to Use

You get a floppy and a small booklet which walks you through the design of a 200,000 volt Tesla coil. Coils giving 40" arcs have been easily designed and successfully built.

The price is right for this time saver.

Great graphics. Easy-to-use. If you build coils, consider this carefully. One 3.5" floppy and one 5 1/2 x 8 1/2 booklet

No. 3002

\$29.95

Plans, specs, wiring diagrams, and solid theory!

Tesla Coil Handbook

TESLA COIL HANDBOOK

by Todd A Pringle

So much of what you find published on Tesla coil construction is badly polluted with mistakes, completely wrong rules-of-thumb, and old-wives' tales.

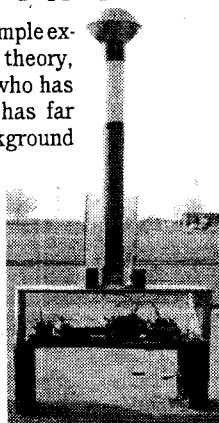
Pringle, a graduate electrical engineer, has done an excellent job of clearing the air by providing theory that is accurate but not overpowering. You'll learn the truth about coils and their problems, some problems often not even suspected by the builder.

You'll learn about 1/4 wave principle, the Ferranti rise, capacitors, power transformers, spark gaps and all the other components of a coil. You'll learn about design parameters and procedures, tuning and operation, sample design, and more.

You get plans, specs, wiring diagrams, and a couple of photos of a coil with a 40" x 4" secondary coil capable of throwing 28" sparks. The info on this coil alone is worth the price of the book.

You get formulas, simple explanations of complex theory, advice from someone who has built a coil and who has far more theoretical background than most of us, plans, suppliers of parts, and valid coil theory.

You get quality. This isn't the biggest book, the cheapest, or the most professional in appearance, but you get value. This delivers accurate information without the BS so often seen in other Tesla coil publications. I think this is worth having. Order a copy! 8 1/2 x 11 booklet binding 60 pages No. 3007 \$9.95



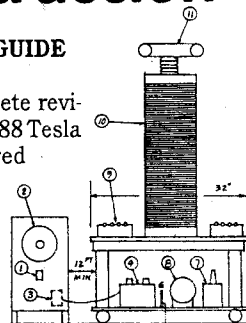
TESLA COIL Construction

TESLA COIL

CONSTRUCTION GUIDE

by J. H. Couture

You get a complete revision of Couture's 1988 Tesla Handbook. Featured are plans for building five different Tesla coils that deliver sparks from one inch to eight feet! Two of these plans are new to this edition.



Chapters include introduction, warning, safety, definitions, coil theory, radiation and Faraday cage, design procedure, computer printouts, power supply, primary capacitors, spark gaps, primary and tuning coils, secondary coils, experiments and tests, and plans for a 70kv, 250kv, 350kv, 1000kv, and 1500kv system. You also get a list of other publications and a source of suppliers.

You get thirty seven illustrations including printouts from the author's JHCTES computer program. You get rare, detailed information and how-to of the same quality as found in Couture's "Tesla Coil Design Manual." If you're serious about building powerful coils, this is must reading. Consider it carefully. About 80 pages plastic spiral binding No. 3013 \$18.00

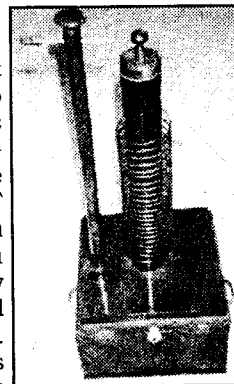
"MiNi" TESLA COIL PLANS

Plans & Instructions to Build the "MINI" TESLA ELECTRIC SPARK COIL

by John F. Nuyen

You get a small, typewritten booklet with practical how-to on building a classic Tesla coil with a primary of 8 gauge wire driven by a Model-T hum coil which can be purchased from some auto supply houses. Suggested sources are provided. The primary consists of 34 gauge wire wound around a 16" length of PVC tubing.

I must warn you that the how-to is not extremely detailed, but it's still quite good. This is a homegrown coil and a homegrown publication that you won't find in any bookstore. Brief, but fairly priced. 5 1/2 x 8 1/2 booklet 16 pages No. 374 \$4.00



High Voltage Farming!

ELECTRICITY IN AGRICULTURE AND HORTICULTURE

by Prof. S. Lemström
reprinted by Lindsay Publications

Lemström's contention is that electricity will make plants grow larger, faster, healthier. He opens his book with an observation that plants grown in Finland and northern Norway in the 1860's were larger and more productive than those grown at lower latitudes where it was warmer. He attributed this to the electrical currents that appear in Polar light.

The rest of his book deals with controlled studies of plants grown with and without electrical stimulation from a Holtz high voltage machine. The prof then considers controlled experiments conducted in Germany, Sweden, and England in the summers of 1902 and 1903. The results seem to show that the electricity promoted growth.

This is an experiments book, and it IS an interesting thing to test once you build a machine. I've seen parts of this book cannibalized and reprinted in a number of other books. Here's the original - the whole thing! Unusual. Rare. Get one. 5 1/2 x 8 1/2 softcover 72 pages plus several plates

No. 21320

\$9.95

Build a JACOB'S LADDER!

Plans & instructions to

BUILD THE TRAVELING ELECTRIC ARC

by John F. Nuyen

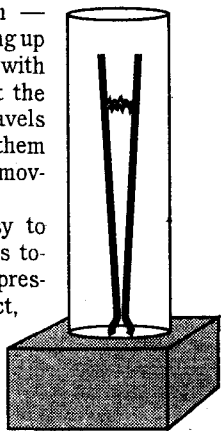
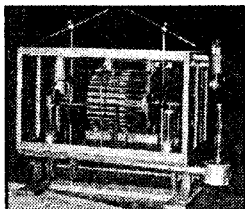
You've seen them — those two wires sticking up in the air in a "V" shape with a spark that starts at the bottom and slowly travels upward. You've seen them in the "mad scientist" movies.

The ladder is easy to build and quickly goes together. It makes an impressive science fair project, although I'm not sure exactly what scientific use there is for it. You can use it to terrify your technologically ignorant neighbors.

Another typewritten booklet by someone who has done it. Get a copy — for your reference library, if nothing else. 5 1/2 x 8 1/2 booklet 16 pages

No. 376

\$4.00

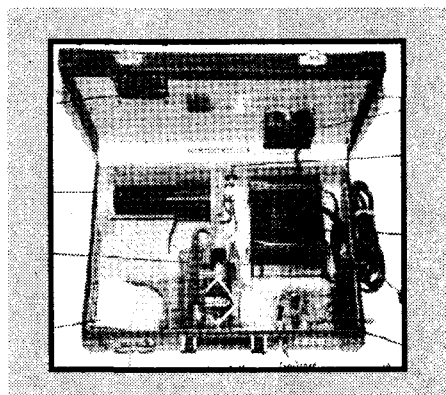


Lakhovsky Oscillator

LAKHOVSKY MULTIPLE WAVE OSCILLATOR HANDBOOK

compiled by Thomas J Brown

Supposedly sometime before World War II, Russian experimenter Lakhovsky asked Nikola Tesla to help him design a high voltage generator that could produce electrical energy at many different frequencies simultaneously. A model of the machine was tested by "physicians" of the time who found that it not only had a 98% cure rate for terminal cancer, arthritis, and other "hopeless" diseases, but that it could rejuvenate plants and animals as well. Don't bet on it.



In this typewritten report you get historical details, wiring diagrams, construction tips, articles on waves that heal, "documented" cases of cure, reprints of the Lakhovsky patents, and a series of reprinted magazine articles on the use of radio frequency waves to cure disease.

Modern physicians have found that electrical fields can speed healing of wounds in some instances. Perhaps this material has some merit, or perhaps it's all a hoax. Maybe it's another suppressed invention. You figure it out. You'll find it interesting reading — a very unusual collection of material. Get a copy. 8 1/2 x 11 softcover 144 pages

No. 357

\$17.95

Oudin Coil Plans

PLANS & INSTRUCTIONS TO BUILD THE HIGH FREQUENCY ELECTRIC COIL

by John F. Nuyen

An Oudin coil is a Tesla coil which generates very high voltage at very low current. If you want to generate lightning bolts this baby will do it. Like Nuyen's Tesla coil, this is driven by a Model-T hum coil and an 8 gauge primary. The secondary is wound with 34 gauge magnet wire on paper tubes.

You'll find this is brief, typewritten, and not "slick" in appearance, but is written by someone who has done it. If you're into Tesla coils, you should have this. Order a copy. 5 1/2 x 8 1/2 booklet 16 pages

Cat. no. 375

\$4.00

Strange High Voltage Medicine!

Radioactive Therapy

STATIC, HIGH FREQUENCY, RADIO, PHOTO AND RADIUM THERAPY

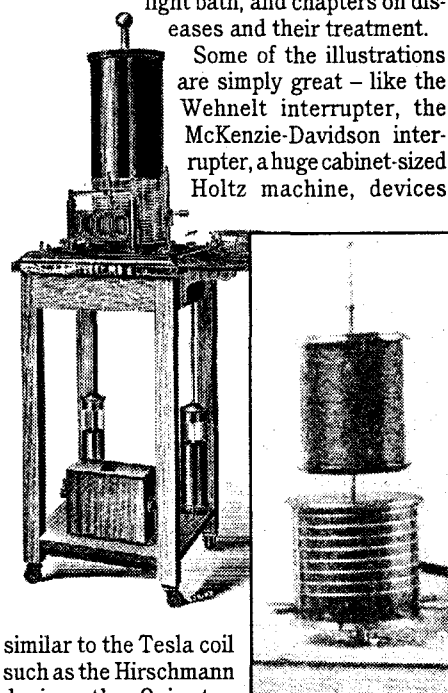
by William Harvey King

reprinted by Lindsay Publications

Unusual electrical apparatus! Bizarre medical claims!

Chapters include: static electricity, induction coil, X-rays, high-frequency currents, Finsen and ultra-violet light, radium, electrophysiology and methods of application, use of static electricity, application of the high-frequency currents, the Roentgen ray, electric light bath, and chapters on diseases and their treatment.

Some of the illustrations are simply great — like the Wehnelt interrupter, the McKenzie-Davidson interrupter, a huge cabinet-sized Holtz machine, devices



similar to the Tesla coil such as the Hirschmann device, the Ovington machine, and more. The

Piffard chair could have been used at Sing-Sing. You'll see a beautiful illustration of the combined d'Arsonval solenoid and Oudin resonator. Check out a quack medicine device that looks like an early tanning bed. And there are some "interesting" pix of people with nasty looking tumors and lesions. (Keep 'em away from me...)

This is a fascinating look at electrical machinery, but it is not a construction manual. Anyone can build a Tesla coil. But if you build your coil to look like these and install it in a fine cabinet people will be convinced you ARE a mad doctor. Maybe Hollywood will put you in their next Frankenstein movie.

You'll find this to be an interesting and very rare book. I can't believe many were sold in 1905. Quite unusual. Order a copy. 5 1/2 x 8 1/2 softcover 291 pages

No. 21311

\$9.95

THE COMPLETE IDIOT'S GUIDE TO BUYING & UPGRADING PCS

by Shelley O'Hara

It doesn't take much computer jargon to make anyone feel like an idiot. Here's a book built to help raw beginners understand what all the hardware is about.

"This all-new Second Edition helps you make sense of the world of hardware and software, so you can figure out what you need, buy it, and get it set up without breaking your bank account. You get simple steps for all the basics, plus friendly advice in an easy-to-understand, easy-to-enjoy format. Tips, definitions, and warnings help you save time and effort, and a handy tear-out checklist helps you keep track of what you need—so you can buy or upgrade with confidence!"



Don't Be Intimidated by Computer Jargon. LEARN!

Chapters include: the least you need to know; a tour of the software; PCs at a glance; setting your priorities; the power of the processor; memory—the computer's thinking capacity; your electronic filing cabinet—the hard disk; data movers—floppy disks; your monitor to the world; keyboard and mouse antics; slots, plugs, and bays—the system unit; multimedia—CDs and sound; on the road again—portable PCs; picking a printer; a modem/fax connections; more drives!; goodies and gadgets; accessories; doing your homework; taking the plunge; what you need to know before you upgrade; opening the box and looking around; adding a second hard drive; installing a CD-ROM and sound card; more memory; and more.

When you're done you'll know the difference between a standard and an extended keyboard. Between IDE drive and a SCSI. Why .28mm dot pitch is better than .39. When you come away from this, you should be able to pick up an ad for a computer and understand all the abbreviations and jargon. Everything is simply explained, and humorous in spots.

Is this the greatest computer book for beginners? I don't know. I haven't read them all. I've been programming computers for thirty years already, and this book answers most of the questions people are always asking me. I think it's pretty darned good. You're gonna need a computer to tie into the Internet. Maybe it's time to start thinking about getting one. If they scare you, it's only because you let them. Fight back. Learn! 7 1/2 x 9 softcover 305 pages

No. 3037

\$16.99

Science Fair Projects!

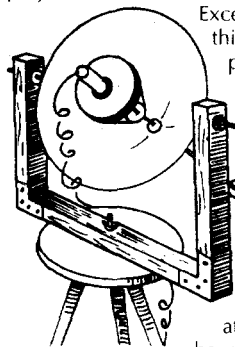
100 AMAZING MAKE-IT-YOURSELF SCIENCE FAIR PROJECTS

by Glen Vecchione

"•Grow your own colorful crystals. •Create a moon craterscape and a Martianscape. •Build a telescope that really works. •See how much pollution is in the air you breathe. •Make a 3-D stereoscopic viewer that seems to bring drawings and pictures to life. •Find out why boats float. •Light a lamp with homemade wet and dry batteries. •Play a musical instrument made from ordinary, water-filled wineglasses. •Take photographs with an easy-to-make pinhole camera. •And 91 other exciting experiments."

These are great science fair projects. Build an electro-scope, electro-magnetic crane, solar cell, wind turbine, polarized lightbox, bottle & pipe trombone, parabolic microphone, a seismograph, and more.

Each project is accompanied by informative drawings showing what the project entails. But! Just following directions in this book isn't going to give you a complete project. The pinhole camera project, for instance, will show you what is needed to build the camera. But you'll have to do extra research on your own to learn how to use photographic paper and chemicals. It's easy. But being forced to do that will open up a whole new world for you to explore. And that's what science fair projects are all about.



Excellent book. Anyone who thinks of himself as an experimenter or inventor MUST be familiar with these projects. Get a copy of this now. Don't wait until the day before the science fair. 'Cause when you call crying to tell us you need the book Next Day Air and we've run out, we will sit here and laugh at you. Order now and have it when you need it!

Good book. I'm going to hang onto mine for dear life. 7x10 hardcover 224 pages

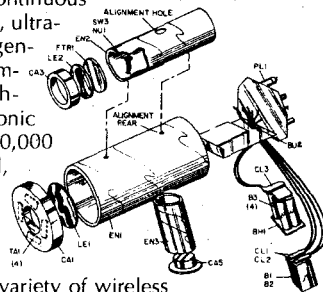
Cat. no. 774

\$17.95

BUILD YOUR OWN LASER, PHASER, ION RAY GUN...

by Robert E. Lannini

Here's one of the most bizarre collections of how-to plans I have ever seen. You'll learn how to build high-power pulsed red ruby laser gun, high-power continuous IR CO2 Laser, ultrasonic field generator, program-mable high-power ultrasonic generator, 250,000 volt Tesla coil, magnetic field distortion detector, solid-state Tesla coil, a variety of wireless



LASERS! PHASERS! ION RAY GUNS!

UNUSUAL PROJECTS

•beginner's simulated laser •visible red laser •pulsed laser rifle •ruby laser gun •CO2 laser •laser light detector •plain field generator •phaser shock-wave pistol •ultrasonic generator •ultrasonic listening device •250 kv Tesla Coil •ion ray gun •magnetic field distortion detector •light-beam communicator •solid-state Tesla coil •infrared viewer •FM voice transmitter •long-range telephone xmtr •parabolic microphone •paralyzing device •wireless repeater xmtr •much, much more!

"bugs", a super-sensitive parabolic microphone, electronic paralyzing device, battery charger and eliminator and much more.

Lannini is an experienced electronics inventor, and holds many patents. He'll give you parts lists, wiring diagrams, assembly diagrams and all you need to get these projects built. I don't think that it's any coincidence that almost every plan has a footnote telling you that kits are available from Information Unlimited, Inc., which is owned by the author and which advertises in the back of the science and mechanics magazines. No doubt, that firm's best selling plans have been reprinted in this single volume.

This book is expensive, but it delivers. I really like this, and I'm sure you will too. Order a copy, even if it has to sit for two years on the shelf before you get ready to build. Excellent book. 8 x 9 1/2 softcover 390 pages.

No. 346

\$21.95

Computer Projects

COMPUTERS

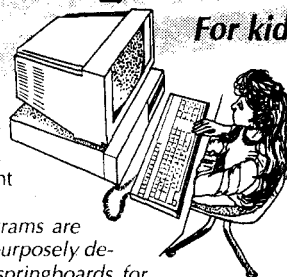
49 Science Fair Projects

by Bonnet & Keen

If you'd like to get your kid interested in computers or you've just picked up a machine, and don't have the slightest idea about programming in BASIC. Here's a book that delivers 49 different projects.

"Fun and creative, the programs are completely functional; yet are purposely designed for students to use as springboards for more sophisticated applications..."

You get very simple programs that deal with games of chance, aircraft design, sorting and filing



For kids like us who are learning

data, calculating energy costs, making mathematical conversions, calculating odds, forecasting weather, and much more.

If you're computer illiterate, get hip. This is for junior high kids, but I won't tell anyone if you use it to get started in computers. It's a great place to start. And if nothing else, these

make great science fair projects. 7 1/2 x 9 1/2 softcover 174 pages

No. 5018

\$10.95

Solenoids and Electromagnets!

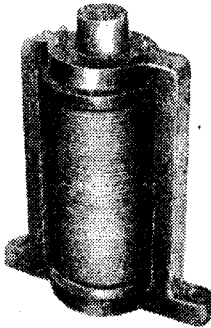
SOLENOIDS, ELECTROMAGNETS AND ELECTROMAGNETIC WINDINGS

by Charles R. Underhill

reprinted by Lindsay Publications

Creating an electromagnet is quite easy as Faraday discovered, and as you and I know. But creating an electromagnet that generates a field of needed intensity, drawing minimal amperage at available voltage without overheating is not so easy. Few people know how it's done. Here you'll learn the secrets of creating working electromagnets.

Chapters include: magnetism and permanent magnets, electric circuits, electromagnetic calculations, the solenoid, practical solenoids, iron-clad solenoid, plunger electromagnets, electromagnets with external armatures, electromagnetic phenomena, alternating currents, AC electromagnets, quick-acting electromagnets and methods of reducing sparking,



materials and bobbins, insulation of coils, magnet wire, insulated wire, windings, forms of windings, heating of windings, and tables and charts. There are also 233 illustrations listed showing everything from a practical multiple-coil winding to rim solenoids telescoped to form disk solenoids. Some things have changed since 1921 such as better insulation and higher-permeability iron, but amps are still and amps and Oersteds are still Oersteds.

Build that perpetual motion machine that some people claim is possible. Or how about a flying saucer? Or how about just getting a copy for your reference library? When the need arises, you'll have rare information immediately available. Excellent book. Get one! 4 1/2 x 8 paperback 342 pages No. 20960

\$15.95

BUILD A MAGNITIZER! Restore Magnetos and Make Magnets!

HOW TO BUILD A MAGNETO MAGNETIZER

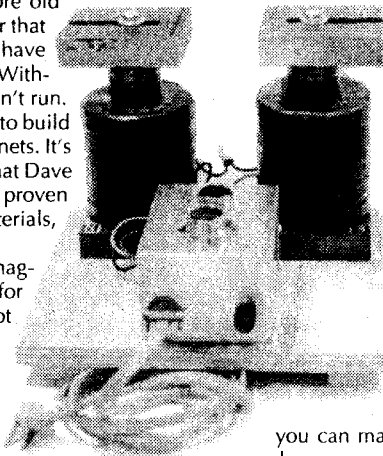
by Dave Gingery

Many people collect and restore old engines and in the process discover that the old iron magnets in the magneto have lost most or all of their magnetism. Without a healthy spark, the engine won't run.

Here, Dave will show you how to build a device to recharge these old magnets. It's certainly not a novel invention. What Dave has done is show you how to build a proven device from currently available materials, and at low cost.

You can recharge old magneto magnets, and create new iron magnets for experimental purposes. This will not recharge newer alnico, samarium, and similar alloy magnets since these need an enormous magnetic impulse beyond the capabilities of this machine. And beside these newer magnets usually don't go "dead" like "plain" ones.

Dave will show you how a magneto works, how to test one, how the magnetizer works and will show you in detail how to build one. He'll give

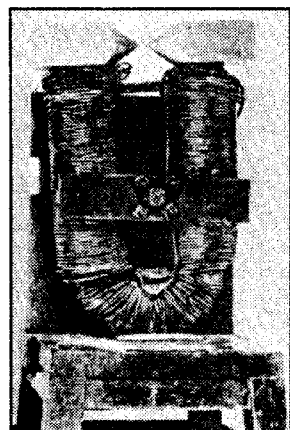


you all the tricks on building the base, winding the coils, building and testing the power supply, and, of course, on using the machine.

You can build this machine quickly and inexpensively. Dave will show you how to avoid what few problems you might encounter. Great for engine restorers, science experimenters, or even as a science fair project. Geez! Maybe you can magnetize that bolt in your neck so you can attract beautiful women.

Well... maybe not. Another great how-to manual from master builder, Dave Gingery. Order a copy today. 8 1/2 x 11 booklet 36 pages No. 3008

\$7.95



Intro to Magnetism

MAGNETISM - An Introductory Survey

by E. W. Lee

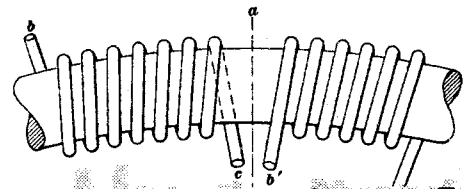
Learn about lines of force; ferromagnetism; paramagnetism and diamagnetism; quantitative measurement of magnetic force; domains and domain boundaries; high-permeability alloys, their theoretical basis and uses; magnetic matrices used as computer-age storage devices; ferromagnetism and antiferromagnetism; and much more.

You get 60 diagrams and sketches and more than 32 pages of photographs. This is one heck of a lot of book for the money. And it's must reading for basement engineers, experimenters, even the guy who's trying to build a magnetic motor or perpetual motion machine. Great background information. Order a copy.

5 1/2 x 8 1/2 softcover 281 pages

No. 365

\$6.95



Electromagnets!

DESIGN OF MAGNETS AND ELECTROMAGNETS

by T B Montgomery

reprinted by Lindsay Publications

Pump current through an copper wire and you get a magnetic field. Wrap that copper wire into a coil, and the magnetic field intensity increases dramatically. You've created an electromagnet.

Good information about electromagnets

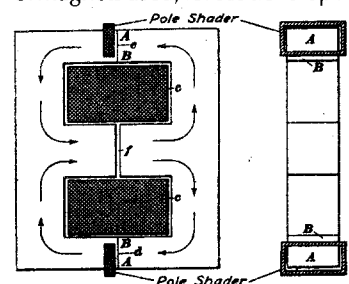
and their design is hard to find. It's either far too simple, or it was written by a physicist building an atom smasher. Here you get a 1948 "textbook" from International Correspondence Schools that delivers something in between.

Chapters include: electromagnetism, types of magnets used, forces developed from mag-

netism, magnet design procedure, and permanent magnets. You get a formula for finding the pull of a magnet and a complete design section with curves, formulas, and examples for creating clapper, solenoids, e-types, AC and DC electromagnets. You also get useful info characteristics of the different materials used in (1948) permanent magnets.

Great easy-to-read-and-understand info. Straight to the point. Build a huge electromagnet. Take it over to your neighbor's house, set it next to his color TV, turn it on, and watch what it does! (You might be liable for damages, though...) Excellent little book. Order one! 5 1/2 x 8 1/2 softcover 96 pages No. 21818

\$9.95



Patents...

Great source of information or a waste of time?

Patents can be a great source of information for the experimenter and inventor. Or they can be a great waste of time and money.

Patents are essentially documents proving that you've invented something new. The invention is your property. No one can profit from your invention without your consent because to do otherwise is theft. Any one can build a copy of your invention for their own use without your permission so long as they don't profit from it. In other words, if there is money to be made from your invention, you are entitled to a piece of the action.

But one of the dumbest ideas I constantly hear, is the old "I'll get a patent and I'll be rich" routine. A patent won't make you rich. You make money from selling your invention not from having the patent itself. If non one wants to buy what you've invented, you've just wasted time and money. The patent is worthless. No manufacturer in their right mind would even want to buy rights to the patent!

You don't believe me? How much money do you think the inventor of protective eye goggles for chickens ever made? Sure he invented them. And yes, he had a patent. But no one wants chicken goggles. None were ever sold. The time, energy and money that went into getting a patent was a waste of time.

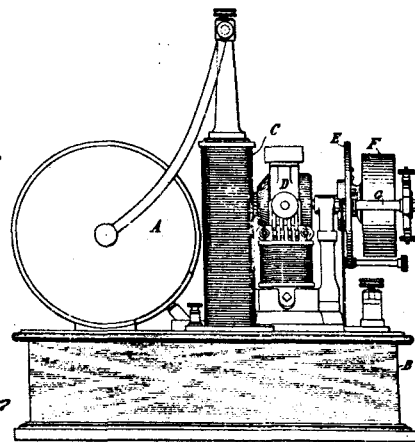
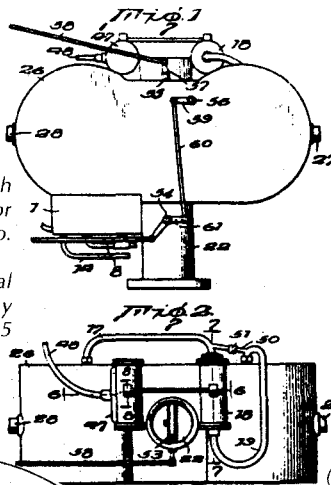
But there ARE patents in the government files for fantastic useful inventions that you don't even know exist. And you can get copies of them for only \$3.50 each. But to do that you have to know the numbers. You can retrieve patent numbers from name plates on old machines, from the introductions to other patents, and from researching the journals of patent registry at libraries.

I order patents from Washington DC, but I've routinely searched through abstracts at the Chicago Public Library in order to get numbers of potentially interesting inventions. That's something you would have to do.

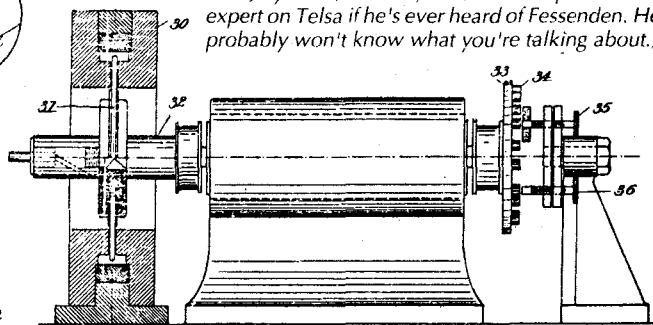
After that, I find that less than half the patents I order have any information of any real value. Many times all that is revealed is some tiny improvement on a previous invention. On top of that, many patents are written by attorneys with twisted "legaleese" writing styles. You'll find it easier to understand ancient Babylonian. Many of the newer patents are written in clear, easy-to-understand English, but the older ones can be impossible.

A lot of crazies want you to believe there are patents out there that have been bought up and suppressed by the government or "big oil". My favorite are 200 mile per gallon carburetors. Patents aren't forever. They expire. Those old carbs from 1930's just don't work. And I don't care how many high mileage carb patents there are in the files. They don't work. How do I know? Automot-

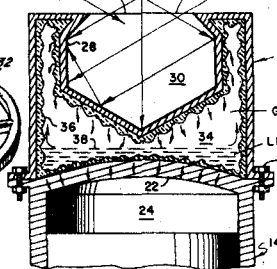
(right) Pogue: High Mileage carburetor from Sept 1935, No. 2,026,798 (left) Charles Garrett: metal detector from May 1972, No. 3,662,255



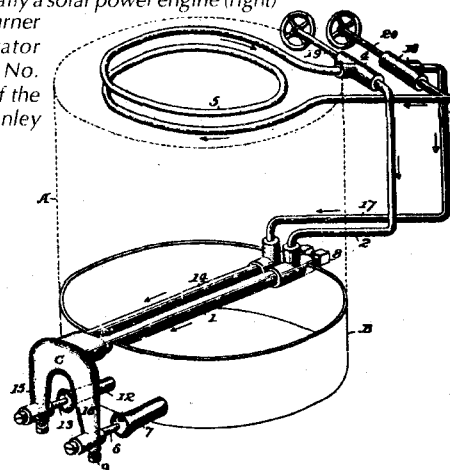
(above) Nikola Tesla: Electric Circuit Controller from August 1898, No. 609,251 (below) R A Fessenden: Signaling by Electromagnetic Waves from July 1905, No. 793,649 (Ask a self-proclaimed expert on Telsa if he's ever heard of Fessenden. He probably won't know what you're talking about.)



(left) NASA: Thermal Energy transformer No. 4,135,367 - essentially a solar power engine (right)



Stanley Brothers: Burner for Steam Generator from July 1908, No. 893,668 - details of the powerplant of a Stanley Steamer!



tive engineers aren't stupid. If they could jack up the mileage on a new car to 200 mpg by simply bolting on a different carb don't you think they'd do it? Imagine the demand! It would be cheaper than investing millions in aerodynamic design, fuel injection and all the rest just to meet government mileage standards. All they would have to do is use a 1930's carb for which the patent has expired, and they'd have it made. But don't do it, do they? Why? Because the carbs don't work. Certainly not with modern gasoline. They may have improved performance for fuel that was more kerosene than gasoline back then, but they won't work today.

The point I'm trying to make is that yes, you can get great old time information on proven performers like the Stanley Steamer, American Type Foundry's die casting and matrix cutting machines, or variable ratio vernier dial drives manufactured by National Company, but you also are faced with stacks of pure BS like 200 mpg carbs and chicken goggles. If you have the time to wade through it, search out a major library near you where patent abstracts are shelved, search out the numbers for the topics in which you're interested, and write for patents.

On the other hand maybe I should just reprint collections of patents on particular topics. But on what? If you have a particular topic that might be worth researching write it on a piece of paper and enclose it with your order. I'll get it. No, I won't

write back. I'm too busy. But I will read it. Maybe we'll do patent reprints in the future. No promises.

You can order patents at a cost of \$3.00 each. I write them, send them a check, wait 3 to 6 weeks and get a stack of repro's in the return mail. Use this address.

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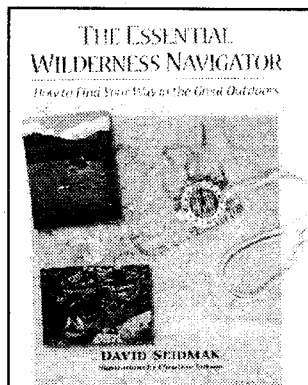
(And hey! Give them a break. Either type the letter, or print the numbers you want in **BIG BLOCK NUMERALS**. The chicken scratch we routinely get on many of the orders we receive here will not cut it with them. You'll end up getting the wrong patents simply because they couldn't read your writing. So give them a break. Write clearly.)

NAVIGATE!

THE ESSENTIAL WILDERNESS NAVIGATOR

by David Seidman

I had to get this for me. My office has become a wilderness, and I have to be expert navigator just to find the door anymore.

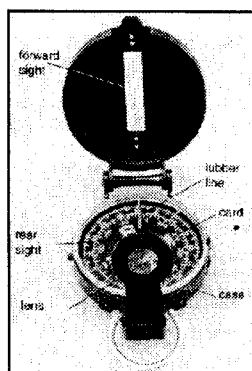
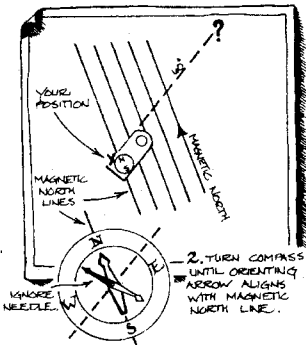


"Whether you're planning an extended wilderness trek or a dayhike on marked trails, here's how to stay found. Find your lost sense of direction. Understand maps. Use a compass

to find your way to and from anywhere. Read nature's highway signs. Plan routes. Navigate in deserts, mountains and snow."

Chapters include sense of direction, maps, compasses, navigation, navigation in use, looking to nature for clues, extreme environments, and appendix.

Within each chapter you'll learn where to get topological maps of great detail, how to interpret them, how to use them with a compass to locate your position and find a route to your destination. For example within the chapter on



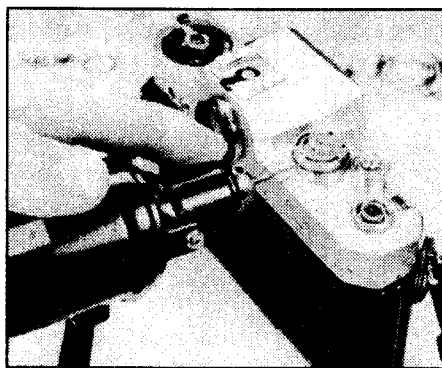
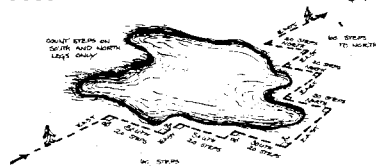
compasses is a section calling "Following a Compass Course". Under that are four sections: going straight, lateral drift, with no landmarks, around obstacles. The whole book is broken down like that.

This a fun book for map people, people who like to solve puzzles, outdoorsmen, and

especially people who get lost easily. Doesn't have much on catastrophic offices, however. Help! Nuts. Help yourself. Get a copy. I think you'll like it. Fun!

7 1/2 x 9 softcover 160 pages
No. 3066

\$14.95



Repair Cameras!

written by a European trained master camera technician

CAMERA MAINTENANCE & REPAIR

by Thomas Tomosy

Cameras are complex devices but many, many problems can be solved quite simply. This book won't necessarily put you in the camera repair business, but you WILL be able to make many repairs.

Chapters include how to use this book, what will you need, important rules and precautions, shortcuts, dos & don'ts, design considerations and characteristics, mechanical cleaning and lubrication, optical cleaning, cosmetic cleaning (exterior face lift), general disassembly and repair methods, accessories and how to maintain them, testing camera functions without instruments, simple diagnostic tools and methods, test instruments you can build, where to find parts and supplies.

Part two will take you through 31 different cameras including the Olympus OM-1, Pentax Spotmatic, Kodak Stereo, Canon AE-1, and even a Hasselblad. In addition parts three and four will give you additional hints on other cameras, tips, charts, and reference material.

Once in the military in Germany I bought a bunch of old cameras for 25¢ each from a scavenger at the local city dump. The shutters didn't work, at least, until I dismantled, cleaned, and lubricated them. I've taken far better pictures with my 25¢ wonders than most people will ever hope to take with even the most expensive camera.

Used cameras are all over the place. Pick one up for a song, repair it, and use it (or give it to some creative kid as a gift...). You can't possibly become an expert with just this book. But it will get you started, and I think you might surprised at the results you get.

8 1/2 x 11 softcover 172 pages

No. 5012

\$24.95

Build a View Camera!

BUILD YOUR OWN VIEW CAMERA

by Bert West

This is a small book, self-published, with a hefty price tag. But what you get is rare information. You'll be shown how to build a working view camera. (If you haven't gotten beyond an autofocus 35mm camera, I had better explain that a view camera is that "old-fashioned" camera with the bellows that have been and still are used by the masters of photography. They're not really old-fashioned. They're the best.)

West will teach you how to make the front standard and lens board, all the tricks of fabricating a bellows, the ground glass assembly, the main support rail, and the other smaller components. He'll also show you (very briefly) why a view camera is so much more powerful than a handheld camera.

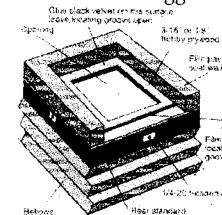
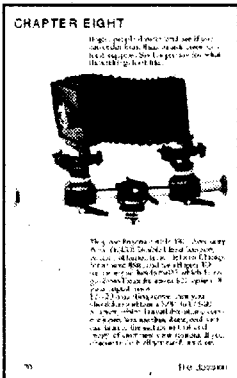
You'll still have to buy a lens, but you can get one fairly cheaply to get started. Some of Ansel Adam's finest, most popular photos were taken years ago with lenses that now sell inexpensively on the used market. You'll also need cut film holders. West suggests sources of supply.

The only really critical part of building the camera is getting the ground glass mechanism precisely aligned. But West shows that even this operation is not that difficult. You don't need to be a technical wizard to produce a quality working view camera for a fractional of the cost of new unit.

You get lots of photos and drawings. A word of advice: I've seen similar books on unusual topics come on the market sell for a while and then disappear because demand was not strong enough to print more. This might be one of them. It's here today, but will it be in five years? Not a bad book. And certainly not a bad camera. Get a copy, and start building. 5 1/2 x 8 1/2 softcover 112 pages

No. 5020

\$19.95

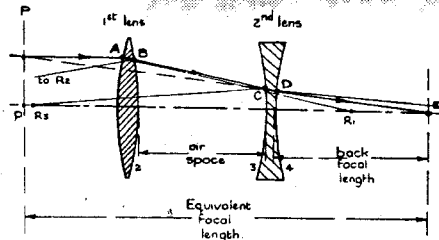


OPTICS AND OPTICAL INSTRUMENTS

by B.K. Johnson

Here's a reprint of a 1947 book that reveals in simple formulas how to design or at least understand microscopes, telescopes, collimators, simple and complex lenses, photographic lenses, mirrors and more.

Chapters include: reflection and refraction, focal length measurements, the eye, the telescope, the microscope, photographic lenses, optical pro-



jection systems, working and testing optical glass, plus an appendix describing how to silver mirrors, cement lenses, and more.

You won't need this material everyday. But if you need basic info on lenses without all the complex theory, get a copy of this. Quite reasonably

priced. 5 1/2 x 8 1/2 softcover 224 pages

No. 551

\$6.95

VIDEO SCRAMBLING & DESCRAMBLING FOR SATELLITE & CABLE TV

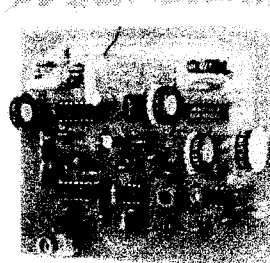
by Graf & Sheets

If you have purchased or plan to purchase a satellite dish to capture signals coming from the many Earth-orbiting satellites, this book is for you.

You get:

- An understanding of encoding/decoding systems
- The theory and techniques of video encryption and decryption
- An overview of the rules and regulations governing the availability and use of satellite signals, antennas, and programming materials
- Schematics and details for several encoder and decoder projects.

Unscramble Video!



Originally published in 1987, this book provides detailed information on everything from simple cable encryption systems to commercial satellite systems such as VideoCipher II™, the B-Mac System, and even the Data Encryption standard.

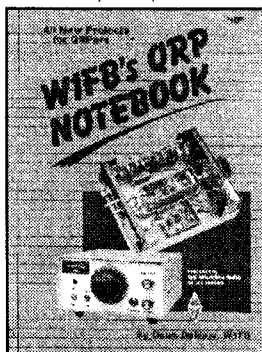
Although the authors are quick to point out that the information is not to be misused in theft of signal, they have provided a wealth of schematics, printed circuit board layouts, IC chip specs, patent reprints, list of satellites and the scrambling systems they use and much more. This is a quality master reference that any video/satellite fanatic will find useful. Order a copy today! 8 1/2 x 11 softcover 246 pages
No. 370

\$24.95

W1FB'S QRP NOTEBOOK

by Doug DeMaw, W1FB

These days amateurs can buy computer driven, high power, high tech transceivers and easily communicate with anyone practically anywhere in the world. But it's almost too easy. There is a backlash. Many people are saying nuts to high power and are using tiny low-power transmitters and simple receivers just as was done in the early days of amateur radio. They call it QRP and love the challenge.



QRP Notebook!

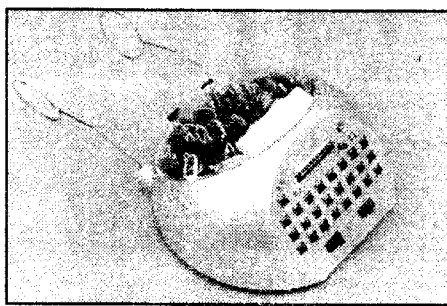
Here DeMaw will show you how to build a simple superhet and several low-power transmitters. And as he goes along, he discusses in detail the mysteries, the potential problems and their solutions, the strengths and weaknesses of circuits and much more. In other words, this is an informal class in practical design.

Educational to the hilt. Same great quality as his other books and articles. Worth having.

8 1/2 x 11 softcover 174 pages

No. 3034

\$10.00



Robotic Projects!

ROBOT BUILDER'S BONANZA 99 INEXPENSIVE ROBOTICS PROJECTS

by Gordon McComb

"By using a modular cookbook approach, there's plenty of leeway left for your imagination. Here are over 99 different experiments that you can use in different combinations to create robots of all shape, size and abilities..."

The majority of the IC's you'll use in the circuits are budget-priced surplus parts..."

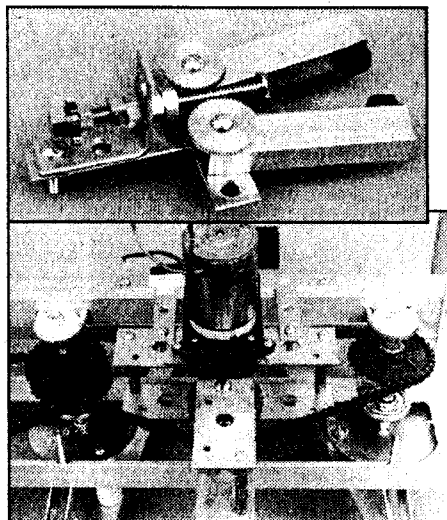
There are a lot of would-be Dr. Frankensteins around today, bringing to life monster robots. You can be one of them.

Chapters include: tools & supplies, buying parts, robots of plastic, building a basic wooden platform, building a metal platform, all about batteries, build an experimenter's power supply, build a battery recharger, choosing the right motor for the job, robot locomotion with dc motors, build a roverbot, build a six-legged walking robot, advanced locomotion systems, build a revolute coordinate arm, build a polar coordinate arm, experiment with gripper designs, adding the sense of touch, adding a mouth to your robot (another one to feed?), sound detection, collision avoidance and detection, computer control via printer port and much more.

This is a collection of robot sub-assemblies and how to build them. You pick and choose what you want your Frankenstein monster to have and bolt it on. No waiting for Igor to come back from the graveyard. Lots of mechanical/electrical systems and how to build them. Loads of ideas. Robotics is hot, and for good reason. It has become inexpensive, relatively easy, and very satisfying. Try it. Everything you need. Except the bolt for the neck. Order a copy. 7x9 softcover 326 pages

No. 3065

\$18.95



Auto Electronics!

AUTO ELECTRICITY AND ELECTRONICS TECHNOLOGY

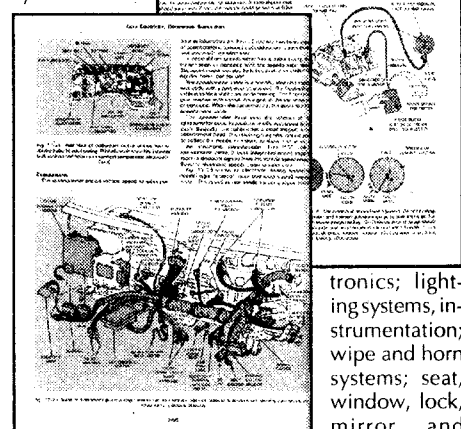
by James Duffy

Pop the hood on your car, and you'll find that it's as much electronic as it is mechanical. Gone are the simple, even the complicated, carburetors. These days fuel efficiency demands fuel injection. Clean air laws demand computer controlled air/fuel ratios. It's getting complicated.

You can figure it out with this technical school textbook. After you're through with this, a professional service manual will make sense, and you'll have a shot

at tuning up and repairing.

Chapters include: electrical principles; ohms law; electrical components; electronic principles, components, digital logic; tools and test equipment; wiring and wiring repairs; using wiring diagrams and manuals; basic electrical test, circuit problems; computers, sensors, actuators; batteries; starting systems; charging systems; ignition systems; fuel and emission control system elec-



tronics; lighting systems, instrumentation; wiper and horn systems; seat, window, lock, mirror, and sound systems; other electronic systems; computer self-diagnosis, scanners, analyzers; sensor, actuator, computer service; charging system diagnosis and repair; ignition system diagnosis and repair; lighting system diagnosis and repair; testing and repairing other systems and more.

The world is changing, and you had better change with it or you WILL be left behind. It's sometimes a pain in the butt having to learn all the new stuff that comes along. But it separates the world into two groups: those who know a little something and are thought to be geniuses, and the rest who are too lazy to learn to program their vcr or microwave oven clock. To which group do you belong? If you're reading this catalog, I would hope the first. Here's a book that help you maintain your genius reputation among the "pack". (and less dependent on "experts") Get a copy, some meters and tune up your car. Good book. 8 1/2 x 11 softcover 527 pages

No. 1416

\$38.95

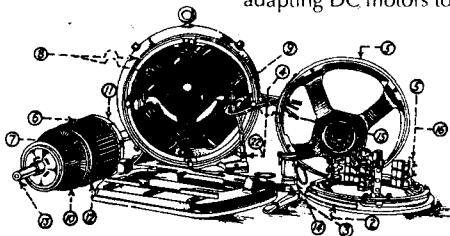
Armature Winding & Motor Repair

ARMATURE WINDING & MOTOR REPAIR

by Daniel H. Braymer
reprinted by Lindsay Publications

From 1920 comes this motor rewinding book loaded with drawings and photographs that will show you how to rebuild both AC and DC machines.

Chapters include: DC machines, AC machines, shop methods of rewinding DC armatures, making commutator connections, testing DC armature windings, operations before and after winding DC armatures, insulating coils and slots for winding, shop methods for rewinding AC machines, testing induction motor windings for mistakes and faults, adapting DC motors to



changed operating conditions, practical ways for reconnecting induction motors, commutator repairs, adjusting brushes and correcting brush troubles, inspection and repair of motor starters and generators, diagnosis of troubles, methods to solve special troubles, tables and more.

You'll find a chapter that shows you how to build special tools and jigs, an armature sling, a pinion puller, coil winding machine, a coil taping machine, commutator slotter, armature banding machine and more.

The motors described are large types used in factories. But the principles apply to the smaller motors you and I use. You'll learn how to reconnect induction motors for different voltages and phases, how to operate a DC motor as a generator and vice-versa, change the DC motor windings for different voltages, and more.

You'll be taught all the techniques - from removing old windings and cleaning slots, to winding the coils, insulating the end connections, inserting the coils, painting the windings, relining split bearings, and much more. You get data on all types of wave and lap windings, varnishing and insulating materials, and much more.

I make you no promises, but this is the logical place to start should you want to rewind a motor to particular voltage, wind a generator or alternator for use with a windmill or waterwheel, rewind a big generator for use as a welder, modify a DC motor for use in an electric car, and so on.

This is a beautiful book. You get over 500 pages of clearly written, wall-to-wall practical how-to with excellent illustrations. It's a gem that should be in the reference library of most "machine freaks" (that includes you, son). Get a copy 5 1/2 x 8 1/2 softcover 540 pages
No. 4384 \$18.50

What's the reason?

Why is Lindsay Publications as fast it is delivering books when other companies take four to six weeks? I guess it's because we care about doing a good job, and they don't.

Generator Conversions!

AUTOPOWER Automobile Generator Conversions & Modifications

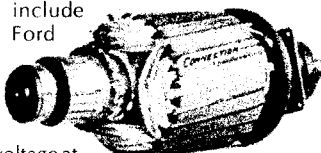
by S. W. Duncan
reprinted by Lindsay Publications

From out of the Great Depression comes this unusual book on ways to make auto generators produce unusual amounts of power. The major problem with this book is that the generators shown being rewound are not easy to find. But the principles taught here can with imagination be applied to modern generators, DC motors, starter motors and more. You get detailed, practical how-to that can be adapted to modern needs.

Chapters include changing a Ford Model A generator to a 110 volt alternator, get constant voltage at variable speed, converting a Dodge 12 volt generator into a 110 volt 500 watt alternator, changing a Model-T to 110 volt AC, making field and armature coils, changing a Delco generator to 110 Volt AC, the winding of automobile armatures, characteristics of DC generators, suggestions on mechanical construction of generators, figuring a new winding for an old frame, converting a farm light plant to 110 volt AC, and more.

We reproduced this from a stained, greasy, and obviously used copy of the original 1935 edition, and although the reproduction is not perfect, it is surprisingly good.

Get a copy of this. This is one of those manuals that people talk about having seen years ago, but can no longer find. Unusual info. Order a copy today. 5 1/2 x 8 1/2 softcover 56 pages
No. 4791 \$4.95



Storage Batteries!

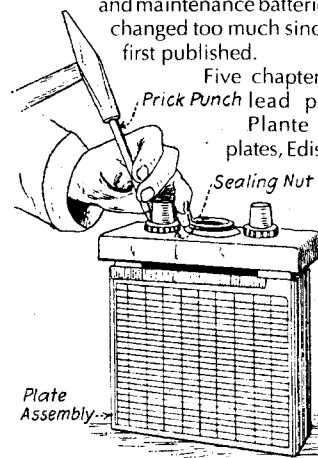
STORAGE BATTERIES SIMPLIFIED

by Victor Page
reprinted by Lindsay Publications

It's old, 1917 to be exact, but it's darned good. Modern storage batteries have plastic cases and plate separators, but in operation, performance, and maintenance batteries really haven't changed too much since this book was first published.

Five chapters cover simple
Prick Punch lead plate batteries,
Plante plates, pasted plates, Edison batteries, details of plate construction, Gould plates, Exide plates, separator function and more. One whole chapter deals with battery defects, how to make electrolyte, dismantling and repairing batteries. You get full details on how to charge batteries, plus a chapter on their use covering auto starting and lighting, electric autos, railroad use, street cars, mines and even WWI submarines!

I don't think the battery repair instructions will be very useful with modern batteries, and I wouldn't even try to build some of the battery chargers described. Nevertheless, there is so much excellent material here that I give it high marks. Loaded with photographs, drawings and charts. 5 1/2 x 8 1/2 paperback 220 pages
Cat. no. 4473 \$8.95



Run Three-Phase Motors! Alternators!

RUN THREE PHASE MOTORS ON SINGLE PHASE POWER!

Yes! You can run three-phase motors on single-phase power using any one of three excellent methods in use since the turn of the century. First, lathes, drill presses, and other machine tool motors can be run with the capacitor method. Second, the autoformer method (a technique you should buy rather than build) is useful for motors running under continuous full load. And finally you can run a whole shop full of three-phase motors from a single, easy-to-build dynamic converter! No rewinding is necessary. These methods are good to at least 150 hp and 220 volts! Low starting currents and excellent power factor are possible.

Basic three-phase and induction motor theory is included. This booklet and some experimentation can have you up and running. 5 1/2 x 8 1/2 booklet 15 pages, 18 illustrations — a BARGAIN!
No. 81 only \$3.00

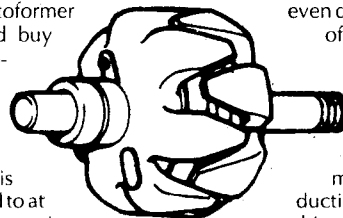
ALTERNATOR SECRETS

If you know the secrets of modification, you can get large amounts of power from a common auto alternator. You can build a portable powerplant driven by a gasoline engine to run brush-type power tools, lights, and AC-DC appliances at remote locations.

You can hot-charge storage batteries, or even do light arc welding. Operation of the regulator is explained so that you can build a custom regulator, if needed, to provide regulated output voltages other than 12.

Learn how you can make almost any ordinary induction motor (like an old washing machine motor) put out 120 volts at 60 cycles without rewinding or internal rewiring. These secrets are worth the price of the booklet alone.

We've jammed a ton of information into 16 pages with small type to keep printing costs down so that we can keep the retail price the same as the old edition. Valuable, rare info! Get a copy. 5 1/2 x 8 1/2 booklet 16 pages
No. 80 \$3.00



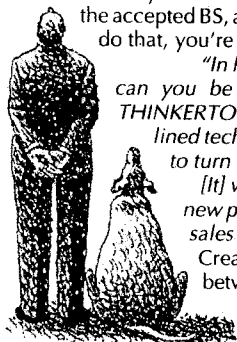
ThinkerToys

THINKERTOYS

by Michael Michalko

Every human bean (or is it being?) has a tendency to get into predictable ruts, especially in his thinking. Tell someone something, and they're likely to believe it. They never question it. So how creative do you think these people are? Right. Zero.

People think I'm really creative on one hand, but get really upset with me because I question what they believe and almost everything they say. This book will teach you valuable techniques for looking at the world, throwing out the accepted BS, and ask "What's really happening here?". When you do that, you're well on your way toward being creative.



"In hindsight, every great idea seems obvious. But how can you be the person who comes up with those ideas? THINKERTOYS makes it easier with over 30 meticulously outlined techniques, and hundreds of hints, tricks, tips, and tales to turn anyone into a startlingly creative thinker..."

[It] will teach you to generate ideas for new businesses, new products, product extensions, new markets, and new sales techniques..."

Creativity and the courage to act on it is the difference between being a leader or a follower, between being a success or a failure, or between being looked up to or down upon. Which are you going to be?

I know from experience that creative people make the world go around. Ask Tom Edison. Get hot! Get a copy of this and be a winner. 7 1/2 x 9 softcover 335 pages

No. 5016

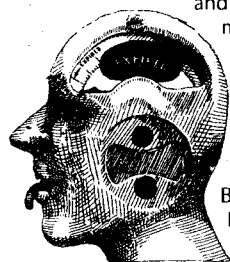
\$17.95

A WHACK ON THE SIDE OF THE HEAD

by Roger von Oech

"How You Can Be More Creative."

Think about it. What makes the authors in this catalog like Dave Gingery and their books special? Is it Gingery's ability as a machinist? Hardly. There are far better machinists out there who haven't done what he's done. Has he invented new technology? Hardly. He's using low-tech methods invented long ago. Then what is special about Dave Gingery? Creativity! He uses his head. He dares to think differently. To explore.



You can be far more creative. Be foolish. Break the rules. Be impractical. Get out of your box. Look for "wrong" answers. Seek ambiguity. Make mistakes... and set your creative self free. Update edition of 1983 best seller. Great illustrations. Even

better text! Get a copy, and get going. 6x9 paperback 196 pages

No. 428

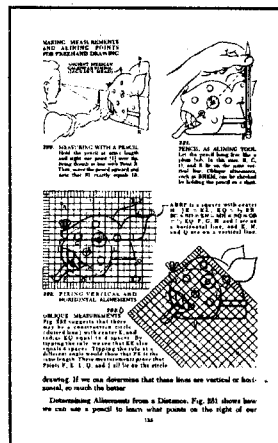
\$14.99

THINKING WITH A PENCIL

by Henning Nelms

"With 692 illustrations of easy ways to make and use drawings in your work and in your hobbies."

"[This] was one of the very first books to attempt to break through the conceptual barriers between words and images... It explains how to draw for those who want to use it for that purpose, but the real value is in the fresh techniques of using illustration as a thinking tool and as a means of organizing and presenting ideas."



Think With a Pencil!

I know some really talented mechanics and machinists who build new machines by trial and error. If they would only take a few minutes and sketch out their ideas, refine them on paper, they'd find that they'd make fewer mistakes and fewer false starts once they got out into the shop. In other words, thinking with a pencil would make them more successful. I've been doing this for years. You should, too.

Get a copy of this book. It's good. You'll learn everything from sketching, to isometric drawing and more. Master this skill. Order a copy of this classic text today. 6x9 softcover 347 pages

No. 6023

\$14.95

Thirty eight chapters include: false faces, slice and dice, cherry split, think bubbles, tug-of-war, idea box, the toothache tree, Worrywillie's Guide to Prioritizing, rattlesnakes and roses, daVinci's technique, Dali's technique, Book of

Rocket Technology!

ROCKET PROPULSION ELEMENTS

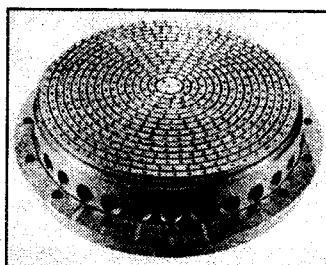
An Introduction to the Engineering of Rockets - Sixth Edition

by George P Sutton

You say you smuggled a Scud home from Iraq in your duffel bag?

What kinds of welds and bolted joints are used to hold a steel solid rocket motor casing together? What are the eight basic types of TVC (thrust vector control)?

Expensive? Yes. But you get your money's worth if you're really a fanatic about space technology. There is more incredible detail than you'll find in a hundred run-of-the-mill space and rocket books. And surprisingly, it's very readable and always fascinating, especially if you're hardware freak.

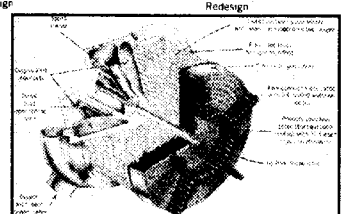
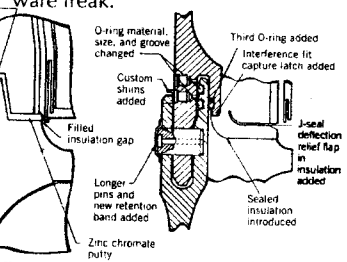


Now you want to modify it and put your mother-in-law in orbit? Well, now. Maybe this can help.

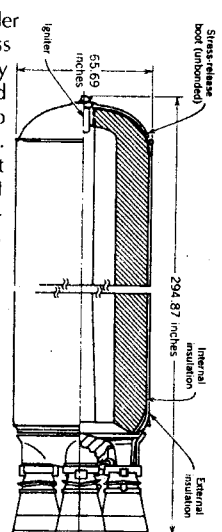
This is a heavy-weight, expensive engineering text that will give you more details about rocket engines and their use than you'll find just about anywhere outside the military and its contractors. This is about technical details - the nitty-gritty about the biggest power plants ever built and operated.

Chapters include - nozzle theory and thermodynamic relations, heat transfer, flight performance, chemical rocket propellant performance analysis, liquid propellant rocket engine fundamentals, liquid propellants, combustion of liquid propellants, liquid propellant rocket engine systems and components, solid propellant rocket fundamentals, solid rocket components and motor design, hybrid propellant rockets, thrust vector control, selection of rocket propulsion systems, rocket exhaust plumes, electric propulsion, and rocket testing.

You get a text that is fascinating combination of detailed text,



Don't order a copy unless you're really interested and able to pay for it. Don't order it impulsively. I will not accept returns



tables, charts, drawings, and math. How is RP-1 (used in Thor, Delta, Titan, Saturn, etc) related to kerosene? How is artificial damping in propellant lines used to reduce "chugging"? The German V-2 pressurized its O2 tank to 2.3 atm to avoid fuel pump cavitation. But do you know how an inducer pump mounted on the same shaft as the turbo pump can reduce the need for pressurization?

for credit or refund if the book is the slightest bit damaged. (A true rocket fanatic would never return it. It's just too good.) And I make no guarantee as to how long I'll keep this book in stock. I offer this to the intellectuals and fanatics among my readers. If you're one, think about ordering a copy soon. Good stuff. 6x9 hardcover 636 pages 1992 6th edition No. 1420

\$99.95

MAGNET SCIENCE

by Glen Vecchione

"What gives magnets their power of attraction? How do compasses help adventurers find their way around? How can you make a magnet float in midair? Uncover the fascinating secrets of magnets with a wide variety of fun activities and experiments. Turn ordinary nails and wire into a magnet, investigate different objects to see which are ferro-

magnetic (attracted to magnets).... Make games, tricks and toys, including tabletop hockey, racing cards, and a figure skater on a lake..."

This is a book for kids, and grown-up kids like you. It's pretty simple, although the spool and wire motor looks like it might be fun to build. But you'll learn something whether you build or not. Find

Magnet Science



out how magnetism is essential these days to dating ancient pottery. Read about magnetic naval mines. And you can impress (or maybe depress) your friends with such \$10 words as paramagnetism, low reluctance, or galvanometer.

If nothing else, get a copy and impress your kids or grandkids with your incredible knowledge (just don't let them see the book...). Could be the makings of a science fair project. Cheap book. Good book. Order one.

5 1/2 x 8 1/2 softcover 128 pages

No. 3063

\$6.95

MAKE PAPER!

ART & CRAFT OF HANDMADE PAPER

by Vance Studley

Making paper is a simple process, conceptually. After all it was discovered or "developed" in China about 1300 years ago. Break plants down to extract their cellulose fibers and form the fibers into sheets.

Chapters include handmade paper; the method of making paper; materials, tools and equipment; how to make paper; and projects. Within each chapter are sections entitled the mold and deekle, beating the pulp, the vat, forming the paper, sizing, layering, casting, and much more.

I don't think this is the greatest book on the topic ever produced, but it will get you going at a very reasonable price. You can try the process, and if you become addicted to it, like too many people are, you can start digging for the more expensive and far out books. Fascinating process. A good, inexpensive book to get you going. 8 1/2 x 11 softcover 112 pages

No. 43

\$6.95



Precision Clocks!

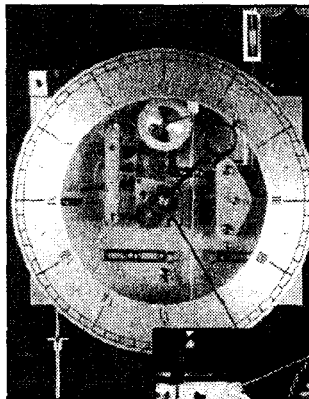
MY OWN RIGHT TIME

An Exploration of Clockwork Design

by Philip Woodward

"The pendulum is a constant source of interest to scientists. Great and well-known inventors such as Galileo, Huygens, and Kelvin all devised mechanisms to maintain its even oscillations. Others such as John Harrison, Lord Grimthorpe, and William Shortt are known only in horological circles but contributed as much or more over three centuries. By writing a personal account of his own inventions and achievements in horology the author

involves the reader in the history of precision time-keeping before the advent of quartz crystals and atomic clocks. Escapements, the mechanisms that



drive pendulums, are a delight to the geometrical mind as well as the delicate and subtle challenge to the mechanical engineer. In their most refined form pendulum clocks not only keep astonishingly accurate time

but are also sensitive enough to detect the ebb and flow of tides and even the ceaseless quivering of the Earth itself."

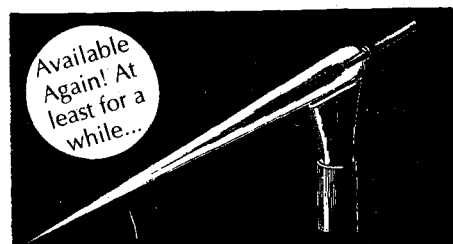
This is an absolutely fascinating book about one precision machinist's quest for more and more accuracy from pendulum clocks. You have just got to see some of his escapements and gearless clocks!

Chapters include a horologist in the making, theory and practice, choosing an escapement, echoes of Hope-Jones, Harrison and Congreve, silence for a cellist, going without gears, disturbed harmonic motion, the phase circle, the Shortt free pendulum, aiming too high, W5, error correction, noise modulation, the enigma of flicker noise, Wallman's conjecture and clockwork with a difference.

Woodward is an engineer, physicist and mathematician. And what a book he has created! What clocks! I've never built a clock, but after reading this, I'm fired up to start. Get a copy and see what you think. It's British and expensive, but what beautiful machines this book reveals! Well illustrated. 8 x 10 hardcover 166 pages

No. 1386

\$49.95



Available Again! At least for a while...

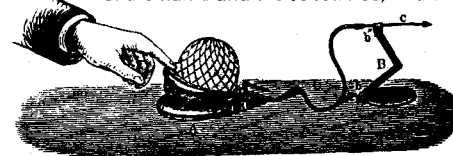
Analyze Chemicals With a Flame!

BLOWPIPE ANALYSIS

by J. Landauer

reprinted by Lindsay Publications

By using a blowpipe to force a flame into contact with an unknown substance you can perform a simple chemical analysis. From the colors of the flame and the substance, and the



residue left behind, you can determine what elements are present in the sample — elements from gold to arsenic.

Prospectors, chemists, and experimenters have used this very simple analysis method for well over a century. This book first published in 1879 and updated in 1892, reveals techniques that today are rarely seen or used, and rarely taught.

Think about it. You can use this method to determine if precious metals are present in scrap before attempting recovery. Prospectors can easily check ores this way because the test is quite reliable, and the equipment was very light in weight and inexpensive. I wouldn't guarantee it, but I wonder if this technique couldn't be used to detect heavy metals and poisons in our water and food. It might be something to look into.

Here's a very simple chemical analysis technique that almost anyone can use to check

for antimony, boron, chromium, cobalt, gold, lead, manganese, mercury, molybdenum, silver, uranium and much more. If your suspicions are confirmed, then you can submit samples to a lab for detailed analysis.

This is a great little book with rare info. If you are at all into this type of work, consider a copy for your reference library.



5 1/2 x 8 1/2 paperback 188 pages.

No. 4198

\$9.95

After May 31, 1997

\$10.95

MAKE MOLDS for Auto Bodies, Boat Hulls, and More!

ADVANCED COMPOSITE MOLD MAKING

by John J. Morena

If you want to mass produce a fiberglass auto body or boat hull or just make a few replacement fenders for an antique car and sell them, you'll need a mold upon which to lay-up the part. If you're really a hot-shot you may want to fabricate an experimental airplane you've designed using carbon-graphite fibers. It doesn't matter how big or how small your project is, you'll need a mold. And here's a dynamite book on building molds.

From the dust jacket—

"...Exceeding all other available works in scope and new-method coverage, this all-in-one resource guides you through the manufacture of both metallic and nonmetallic molds used to form or bond advanced composite parts and assemblies. It provides detailed instruction on how to use each kind



of mold-making material and execute each mold-making process.

Step by step you will see how to use innovations such as computer-aided design and manufacture of molds and tools... preimpregnated laminate fabric materials, and mass casting compounds that can be heated to 3000 degrees Fahrenheit... techniques for making metal-faced laminate tools... and reusable vacuum bagging methods...

Unequaled coverage of a wide range of mold materials enables you to select the material most suitable to your project. Clear guidance is given on how to use epoxy, polyurethane, plaster, wood, ceramic, reinforcements such as fillers, graphite and fiberglass, laminated phenolic, formed and machined aluminum and steel, electroformed nickel, and many other materials to make high-quality advanced-composite molds.

You can depend on Advanced Composite Mold Making for all the design and engineering guidance necessary for making molds for producing high-quality advanced composites..."

Other books will show you how to fabricate fiberglass, but how many give details on moldmaking? Here's the best I've seen. Consider it carefully. 6 x 9 hardcover 431 pages No. 495

\$67.50

Carbon & Graphite Fiber Composites!

TECHNOLOGY OF CARBON & GRAPHITE FIBER COMPOSITES

by John Delmonte

What are composites? Fiberglass is one. Here you have glass embedded in a resin matrix. Replace the glass with carbon or graphite fibers and you end up with an incredibly strong, lightweight plastic material that is used as fan blades in jet engines, as heavy duty truck springs, or even as pressure vessels to hold oxygen, nitrogen, and helium on the space shuttle.

Chapters include: origins of carbon and graphite fibers, preparation and properties of carbon and graphite fibers, synthetic resin matrices for service to 200°C, matrices for use up to 300°C, thermoplastic matrices, surface treatments and their effect on composites, mechanical and physical properties, electrical properties and applications, environmental influences, test methods for advanced composites, composites in aircraft and automotive applications, industrial and commercial applications, high temperature resistant matrices, and

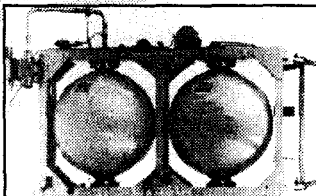
manufacturing and processing techniques.

This is a great introductory industrial text. You get charts, tables, chemical structures, test data and loads of detail you'll never get from some men's magazine article. Obviously, this is not going to reveal top secret methods used by the military to build stealth fighters, but you'll come away from this book with in-depth knowledge of composites.

Expensive, but this book delivers the secrets of a high-tech material science. Tune it, and find out what's happening. Maybe you can find a way to fabricate your own! Get a copy! 6x9 hardcover 452 pages

No. 1143

\$46.50



Concrete, Masonry and Brickwork

CONCRETE, MASONRY AND BRICKWORK

by the U.S. Army

Fortunately, Army brick walls are better than Army food. They usually taste better and are easier to digest. Here, you can learn to pour concrete and lay brick and block without having to enlist.

"Any home owner who wants to build a patio, driveway, porch, retaining wall, permanent barbecue, or even a garage, will find the essential techniques and procedures of concrete, masonry and brickwork in this practical handbook..."

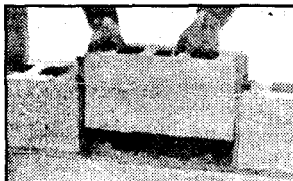
Part One covers concrete components: proportioning concrete mixtures, book, trial batch, and absolute volume methods; form design and construction; construction procedures - excavation, formwork, mixing, handling and transporting, placing, finishing, curing, effects of tempera-

ture, form removal, patching; reinforced concrete construction, including precast concrete. Part Two continues with a general discussion of mason's tools, mortar, and scaffolding; concrete masonry characteristics of concrete blocks, construction procedures; brick and tile masonry characteristics, bricklaying methods, brick construction, and more. 37 tables present important statistical information in convenient form, and 177 figures lavishly illustrate all portions of the text."

1970 Army training manual. Reasonable price. If you like this, maybe I can dig up an Army cookbook! Wouldn't that be frightening? 8 1/2 x 11 paperback 200 pages

Cat. no. 1322

\$7.95



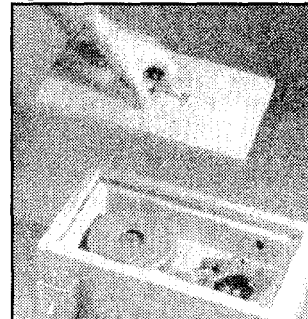
DO IT YOURSELF VACUUM FORMING

by Douglas E Walsh

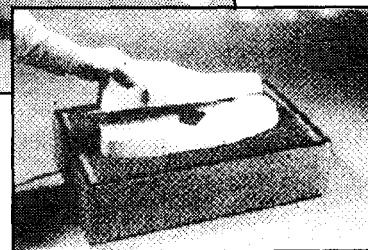
The author wrote me:

"I tried the obvious way first, as I'm sure many others have by using a kitchen oven and shop vacuum cleaner. The results were OK, but limited to simple parts in thin plastics. The oven part works fine but the vacuum cleaner just didn't provide enough vacuum.... Real vacuum pumps cost hundreds of dollars..."

I thought about it some more and came up with eight other sources for vacuum, most of which are



inexpensive and one is totally free! I was then able to combine a vacuum cleaner with a cheap source of higher vacuum. This gave me that magic combination of high



Vacuum Form PLASTICS!

"...simple forming for
about \$15.00 or less..."

vacuum and high flow necessary for serious forming.

This easy-to-read book shows you how to get set up to do simple forming for around \$15.00 or less if you scrounge for parts. You can also build a two-stage high vacuum system for \$50-\$60 that can form up to 1/4" thick plastics...."

You can produce magnetic signs, parts for models, and all kinds of things if you use your imagination. You can put this simple, but powerful mass-production technique to work for you because you don't have to spend a fortune on equipment.

Chapters include the basics, heat sources, vacuum sources, forming equipment, plastics, molds, forming and finishing. You get straight forward to-the-point how-to with plenty of photos and drawings.

Possible money maker! Fun to try. Here's an excellent book by a man who has done it, and explains it clearly. Get a copy! 5 1/2 x 8 1/2 booklet-style spine 128 pages

No. 1308

\$9.95

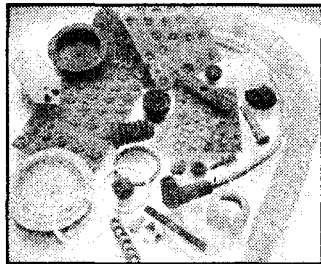
**If you have to telephone
us, please do so early in
the day.**

Master Plastics Reference!

**HANDBOOK OF PLASTICS,
ELASTOMERS, AND COMPOSITES**

by Charles A. Harper

If you're one of those few people who need a comprehensive handbook that reveals the complete world of plastics, this industrial handbook is for you. It's not how-to. It's a complete reference on plastics and their use.



You get eleven chapters and five appendices. Chapters include: fun-

damentals of plastics and elastomers, electrical design properties and testing, mechanical design properties and testing, laminates and reinforced plastic materials and processes, advanced composite materials, liquid and low-pressure resin systems, thermoplastic elastomers, protective and decorative coatings, plastics and elastomers as adhesives, chemical and environmental properties of plastics and elastomers, and design and processing of plastic parts.

Appendices cover glossary of terms and definitions, common abbreviations, important properties for designing with plastics, electrical properties of resins, and sources of specifications and standards.

What are the four types of curing agents for epoxy resins and their characteristics? Is the body of your car a reinforced thermosetting polyester? What do you know about rubber-like compounds called elastomers? Neoprene? Hypalon? Silicones? Find out!

If you're winding a motor, do you know that NEMA MW 75 magnet wire is insulated with 130°C polyurethane? What are the advantages of vacuum bag molding process? What's a reaction injection molding process all about? What are the characteristics of carbon and graphite plastic composites used in high-performance aircraft?

What types of liquid resins can be used in casting, rotational molding, centrifugal casting, liquid injection molding, pultrusion, resin transfer molding, and reaction injection molding? What do you know about cast phenolics? Liquid silicone rubber? Did you know the finish on your car is plastic?

And on and on and on....

This is a very expensive master reference that will introduce you into the world of plastics. This isn't simplified or sugar coated. This is the straight industrial scoop - loaded with technical details. Don't order this unless you're really interested. This isn't a Dave Gingery how-to book. You're going to have to have at least a moderate level of sophistication. I'm offering this for a short time for those few people who need this sort of thing.

It's expensive, but it's top rate. Highly specialized. We don't always stock it. Consider it carefully. 8x10 hardcover over 900 pages

Cat. no. 1314

\$95.00



Molding & Casting Handbook

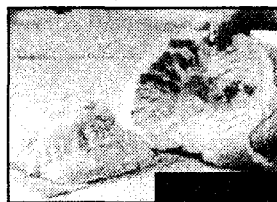
The Prop Builder's

MOLDING & CASTING HANDBOOK

by Thurston James

Try this! Take a dead carp and make a couple two-part plaster molds before it starts to decompose. Then make urethane castings with the molds. These are the techniques that Hollywood uses to make props for movies.

This is a great book all about making molds and



casts for theatrical uses. You'll learn about one- and two-part plaster molds, a two-part mold using the shim

method, molds from dental alginate and moulage, and a variety of molds using latex rubber, Silicone RTV rubber, injected Silicone molds and more.

You'll learn what type of release compound to use for each combination of mold and casting material.

Then you'll learn how to do absorption casting with latex and neoprene casting rubber. You can make papier-mache, Celastic and fiberglass casts. You can cast with hot melts such as wax, machinable wax, hot plasticine, hot melt glue, and hot melt rubber. You can make fake "glass" bottles to break over people's heads, or panes of glass to safely throw people through during a barroom brawl (or the Christmas family get together). You might want to cast with polyester resins, urethane foam, plastic wood, Durham's Rock Hard and more.

Then there is a whole section on vacuum forming with thermoplastics using a large, high-performance, home-made vacuum forming machine. You can watch as artists reproduce railings, cornice molding and even tile roofs in lightweight plastic sheeting. It's quite impressive. And the whole book shows you how you can do it, too.

Wall-to-wall photos. Detailed how-to. Hints, tips and secrets. This is a book on casting practically everything EXCEPT metal. Rare information. I think you'll really like it. You get your money's worth, and then some in my opinion. 8 1/2 x 11 softcover 236 pages

No. 1328

\$19.95

THEATER PROPS!

THEATER PROPS HANDBOOK

by Thurston James

You can build all kinds of off-the-wall props for the theater or your next Halloween display. You can start simple and build a scarecrow, and owl, a barbecued lamb on a spit, simulated arrowheads and pots, simulated barbed wire, artificial blood, a slimy heart, a knife that drips blood, and more.

You'll see epoxy putty and ethafoam used to make swords, smoking pipes, and furniture. See a phony butterchurn being made. Learn how they bent PVC pipe to make a shepherd's crook. Urethane foam was used to make a "ray gun" for a



space man and a full-scale dog. This foam is also seen chucked in a lathe and drill press to make eggs, balisters and a beehive.

You'll

learn sewing secrets, how they made a phony beer can label, how fake food is made, how to make low-cost footlights, the secrets of adhesives, building a fake gramophone, making ice-cubes out of Plexiglass, and much, much more.

Fascinating book of unusual skills. Heavily illustrated. Just plain fun. Get a copy to fire your imagination. Build sumthin' to rattle people's cages... 8 1/2 x 11 softcover 272 pages No. 1383

\$19.95

Make Masks!

**THE PROP BUILDER'S
MASK-MAKING HANDBOOK**

by Thurston James

Make mask! The basic sections include masks and persona, early man and his masks, life masks, the neutral mask, character masks, leather masks and the commedia dell'arte, mask-making workshop in Padua Italy, making a mask in leather, other leather-working techniques, and appendix.

Discover how to make an alginate life mask of that favorite person in your life (other than your dog or bartender).

Make positive and negative molds, and make a positive plaster copy of the life mask.

Make a plaster negative mold from an original mask design and use it to make paper mache, latex rubber, neoprene or "friendly" plastic positives. You can make a positive gypsum cement mold. And you'll learn how to create a mask from a positive mold by vacuum-forming, thermoplastic orthopaedic tape, celastic, and glue cloth. The second half of the book will show you in detail how to work leather into incredibly beautiful masks. You'll learn how to turn sheet metal into a beautiful mask with chasing and repousse. Then you'll learn the techniques involved in producing fantastic halloween masks.

Excellent book. Wall to wall how-to. Heavily illustrated. A book definitely worth having. Get one! 8 1/2 x 11 softcover 203 pages

No. 1340

\$19.95



Be a Cryptanalyst!

CRYPTANALYSIS

by Helen Fouché Gaines

One of my long-time favorites. Got my first copy decades ago.

This is a study of ciphers and their solution. Since it first appeared in 1939, it obviously is pre-computer age, but when it comes to solving substitution ciphers, this book is the nuts.

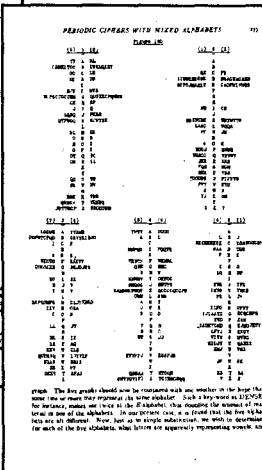
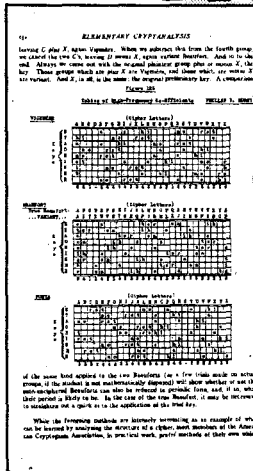
Contents include concealment devices; transposition types; geometrical types; columnar transposition; simple substitution; consonant-line shortcut; multiple-alphabet ciphers; the Vigenere; Gronsfeld; Porta and Beaufort ciphers; the Kasiski method for periodic ciphers; auto-encipherment; periodic number-ciphers; highlights of fractional substitution and much more.

This is useful for solving ciphers common in

World War I and before. These days computers generate pseudo-random keystreams that are added to information to conceal it. Before computers, rotor machines like the German Enigma machines were used. You need a powerful computer and heavy math to break those codes.

Nevertheless this might be useful in breaking some of the cryptic messages that treasure hunters swear are coded messages showing where fabulous treasure is buried. For the rest of us, solving newspaper cryptograms might be our only application. Very unusual information. Fascinating.

For puzzle solvers. Reasonable price. Get a copy! 5 1/2 x 8 1/2 softcover 237 pages No. 718 \$4.95



Edison's Assistant Remembers Menlo Park!

MENLO PARK REMINISCENCES VOL 1

by Francis Jehl

Great Book! Not only do you get the inside scoop on the electric light, the phonograph, mimeograph, the telephone (Bell beat Edison to the patent office by one day), but you get the anecdotes that proves how brilliant and bizarre Edison really was. This was a guy that I would have liked to meet, a guy who chewed tobacco, spit on the floor, told vulgar stories and was known for his creativity and sense of humor – a true "character".

From the backcover:

"In this revealing book, a former laboratory assistant to Thomas Alva Edison (1847-1931) recalls life in the great inventor's laboratory and workshops at Menlo Park..."

Eighteen years old when he first arrived in Menlo Park in 1879, Francis Jehl subsequently witnessed a flood of ingenious inventions...

Offering exceptional coverage of the technical aspects of Edison's work, this profusely illustrated volume will also fascinate the general reader. (The author's account of Edison playing with his newly developed phonograph is delightful!)... Nearly 400 photographs and illustrations depict Edison and his assistances; Menlo Park; Edison's laboratory, inventions and instruments; the restored sites at Henry Ford Museum & Greenfield Village; and more...

Brimming with anecdotes and intimate first-hand observations, Menlo Park Reminiscences provides 'a really lively picture of Edison at work'...

If you're into the history of technology, or you would really like to "meet" one crazy, talented guy, then you should have this book. Edison would have devoured this catalog had it existed in his day. He was one of us. (Well, maybe he wasn't THAT bizarre...) Fascinating book. Get a copy.

5 1/2 x 8 1/2 paperback 448 pages 113 illustrations 267 photos Cat. no. 377 \$13.95

Ancient Inventions

ANCIENT INVENTIONS

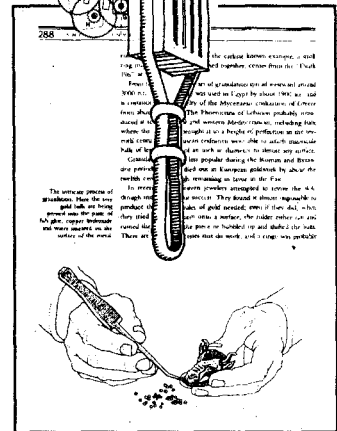
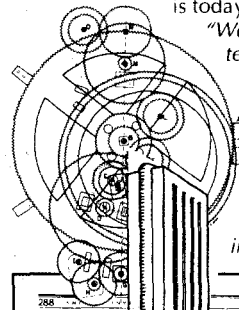
Wonders of the Past!

by Peter James and Nick Thorpe

A few of the people who read this catalog will actually admit "I don't wanna know'nuthin' but how to build this here machine. Nuthin' else..." But I like to think that most of the people who submit themselves to the verbal torture I hand out in these catalogs are at least a bit more intellectual than that. If you're one of those people who are curious about how our world got to be the way it is today, then check this out.

"We in the twentieth century tend to assume that our era has a monopoly on the inventions of clever machines, labor-saving devices, feats of engineering, and advanced technology. But as the authors of this fascinating and eye-opening book reveal, some of humankind's most important and most amazing inventions actually date back thousands of years...."

Written with the pure joy of discovery, Ancient Inventions reveals that:



Baghdad had an efficient postal service, banks and a paper mill • rudimentary calendars were being used in France as early as 13,000 bc • apartment condominiums rose in deserts of the American Southwest a thousand years ago • the ancient Greeks used an early form of computer • plastic surgery was being performed in India by the first century bc • the Egyptians knew about effective contraceptives • flamethrowers were used in battles waged in tenth-century China

Brimming with odd facts and entertaining curiosities, written with zest and humor, comprehensive and fun to read...

Chapters include medicine, transportation, high tech, sex life, military technology, personal effects, food and drink, urban life, working the land, house and home and more.

Within the chapters are smaller fast reading illustrated sections on individual inventions such as electric batteries, sex toys, hand grenades, poison gas, soap, wigs, tattooing, fish and oyster farms, tunneling, chewing gum, refrigeration, the steam engine, diving gear, clocks, ballooning, false limbs, glass windows, keys and locks, key-boards, telegraphy, lavatories, and much, much more.

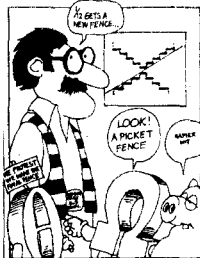
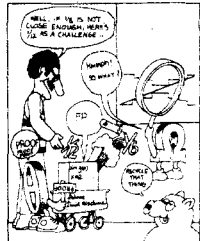
This is a big book loaded with fascinating reading. If you are one of those people who finds thinking painful, don't order this. If you want to be surprised and entertained, get a copy. I'm convinced you'll like it. 7 1/2 x 9 softcover 672 pages No. 786 \$17.50



Comic Calculus Primer

Prof. E. McSquared's CALCULUS PRIMER
by Swann & Johnson

This is the craziest math book I've ever seen! I had calc in college but never in comic book form like this! You should order a copy of this and learn what it has to teach.



Calculus is the difference between engineers and non-engineers. If you would like to read engineering texts and understand what they're talking about, you need a calc background. This won't make you a pro, but you'll understand what functions and discontinuities are, limits, and derivatives. You'll pick up the language and be able to understand scientific talk.

It will take work on your part, but I've never seen a more brilliant explanation of what's happening. This is a tool like a lathe or a table saw. Learn

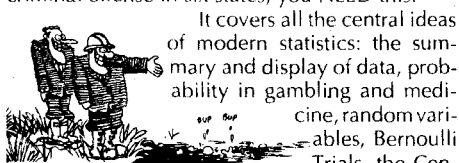
this skill, and it will return dividends for all the years you have left to live. An unusual way to learn the core concepts of calc. 8 1/2 x 11 softcover 214 page comic book.

No. 51 \$19.95

Cartoon Guide to STATISTICS

THE CARTOON GUIDE TO STATISTICS
by Gonick & Smith

If you think that the standard deviation is a criminal offense in six states, you NEED this.



It covers all the central ideas of modern statistics: the summary and display of data, probability in gambling and medicine, random variables, Bernoulli Trials, the Central Limit Theorem, hypothesis testing, confidence interval estimation, and much more—all explained in simple, clear, and, yes, funny illustrations. Never again will you order the Poisson Distribution in a French restaurant!

After you've studied this book, you'll know why only suckers play the lottery. (It's been said many times "Lotteries are a tax on the naive..."). Find out why. Statistics keeps useless drugs off the market, increases your gas mileage, even gets color photos back from Jupiter. It's essential to precision measurements of all kinds.

Statistics is one of the most useful forms of math I've ever discovered. This is one of the better math books I've seen. Consider it. 7 1/2 x 9 paperback 230 pages

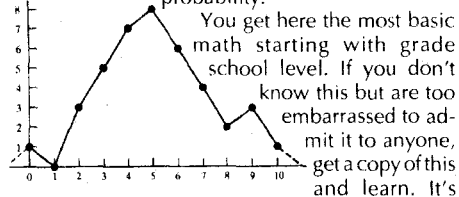
No. 599 \$14.00

Math for Adults!

ARITHMETIC AND ALGEBRA ... AGAIN
by Immergut & Smith

"This book is written for all of you with unhappy memories of having to struggle with numbers at school; the flash cards in elementary school and how you prayed you wouldn't be called on..."

Here's real help and real hope. Here you can learn math from scratch or review it. This is the stuff I use every day. You should, too. Chapters in Part One include: arithmetic of whole numbers, integers, decimals and percents, fractions, applications, and measurements. Part Two covers algebra: basic operations, equations and inequalities, graphing, and word problems. Part Three covers practical math: math in banking, statistics and probability.



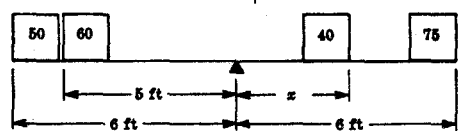
written for adults who deal with the real world, not kids. You'll pick it up in a hurry. Which is larger 0.245 or 0.268? If bell metal is composed of 4/5 copper and 1/5 tin, how much of each of these metals is there in a church bell that weighs 87/100 of a ton? If the price of a radio was \$28.09 after an 8.25% sales tax was added, what was the price of the clock? and on and on....

You get easy-to-understand text and lots of practical problems with answers. Great basic math book for adults. If this something you want to learn, get a copy. 8x11 softcover 379 pages
No. 5015 \$14.95

Word Problems!

HOW TO SOLVE
WORD PROBLEMS IN ALGEBRA
by Mildred Johnson

I cringe when I hear someone say the didn't mind math is school, but they hated story problems. That's usually when I blast them. I tell them that what they studied wasn't math, it was arithmetic. Life is a story problem, and the application of arithmetic to solve such problems is what math



is all about. I use math in mixing chemical solutions, building radios, calculating return on investments, brewing wine, and a thousand other things.

Chapters include time, rate, and distance; mixtures; coins; age; levers; finance; work; plane geometric figures; digits solutions using two unknowns; quadratics; and miscellaneous problems.

Joe can paint the barn in 5 days, and George in 8 days. They start painting but after 2 days, George accidentally locks himself in the outhouse and can't get out. How long will it take Joe to finish painting the barn? You should be able to figure this out. (Although no one will ever quite know how George got himself locked in...)

Practical everyday math. You SHOULD know this stuff. Get a copy and learn. 5 1/2 x 8 softcover 166 pp
No. 5014 \$6.95

Practical Math!

Extremely Powerful Tool!

PRACTICAL MATHEMATICS FOR HOME STUDY
by Claude Palmer
reprinted by Lindsay Publications

Math is important to mechanics and machinists. It can mean the difference between having a design fail or getting it right the first time. If you're rusty on your math and need a good review, this is A great book to have.

Chapters include common fractions, decimal fractions, short methods, weights and measures, percentages, ratios and proportion, density and specific gravity, and powers and roots.

The geometry chapters cover plane surfaces, triangles, circles, graphical methods, prisms, cylinders, pyramids and cones, spheres, and other solids.

The algebra chapters include notation, formulas and translations, positive and negative numbers, addition and subtraction, exponents and powers, quadratic equations, variation, graphics, logarithms, angles, trig functions, trig tables, right triangle, and more.

You'll learn the math in short, clearly explained lessons. Then you'll be asked to solve problems like "Two steam boilers of the same shape are respectively 12 ft and 15 ft long. Find the ratio of their surfaces." After you solve the problem, you can check it against the answer given.

Another problem asks "To what diameter should a piece of stock be turned so that it may be milled to a hexagon and be 1 3/4 in. across the flats?"

Or solve this one: "The pulley on the headstock of a lathe is 3 in. in diameter. This is belted to an 8-in. pulley on a shaft that makes 420 revolutions per minute. At what rate will a block of wood placed in the chuck revolve?" You'll be able to solve these and hundreds of other problems.

You get a big book loaded with valuable lessons and practical problems. Get a copy and get going. 5 1/2 x 8 1/2 softcover 518 pages
No. 4775 \$12.95

Be A Speed Demon with Numbers!

HOW TO CALCULATE QUICKLY

by Henry Sticker

"Do you want to double or triple the speed with which you calculate? Can you run a rapid mental check over the results of your calculating machines? Can you check bills worked out for you by grocery store cash registers, on waiters' checks? Or do you simply take their word for the disposal of your money?... This book teaches those necessary mathematical techniques which schools neglect to teach: Horizontal addition, left to right multiplication and division, etc. ..."

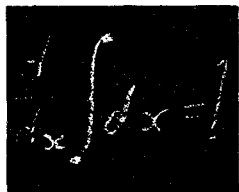
If you're not afraid of a milling machine or a ladle full of molten metal, then why should you be afraid of numbers on paper or in your head? This inexpensive book of tricks can help you get better use from simple math. Valuable for everyone. Dirt cheap. Get a copy. 5 1/2 x 8 softcover 185 pages
No. 598 \$3.95

Calc Made Easy

CALCULUS MADE EASY

by *Silvanus Thompson*

Fear is often the biggest obstacle to learning math — all those strange symbols! When a calculus book starts out in the first sentence of first paragraph on the first page explaining what the most scary symbols mean, you know it's a good book. The author obviously wants to teach you something rather than scare you.



Any scientist or engineer will tell you calc is a tool not much different from a welder or a lathe. But I took calc from a mathematician in college, and that jerk thought calc was an art form! Most of the

time I didn't know what he was talking about (I'm not sure he did either). Who's looking for beauty in numbers? I need to solve problems.

This shows you how useful calculus is. It is as practical an approach as I've ever seen, and the author really takes the fear and confusion out of teaching this math.

Don't get me wrong. Just thumbing through this book is NOT going to teach you calc. You're going to have to work at it. But Thompson's approach is down to earth, and he covers it all: differentiation and integration. And this is 90% of the heavy math you see in engineering books.

A lot of book for the money! If I had had this book at the same time I had that madman mathematician, I probably would have learned a lot more. It's too late for me, but not for you. Order a copy. 5 1/2 x 8 1/2 softcover 250 pages.

No. 52

\$8.95

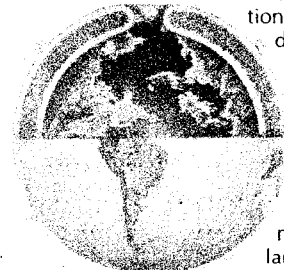
Hollow Earth!

THE PHANTOM OF THE POLES

by *William Reed*

reprinted by *Lindsay Publications*

The earth is hollow! You get a reprint of an early, rare classic text on the theory claiming there are holes at the ends of the earth that lead into the interior where there are continents and civilizations that are yet to be discovered.



Chapters include flattening of the earth at the poles, length of polar nights, working of the compass, around the curve, mysteries of the polar regions, the water sky — what it is, the aurora, meteors or volcanic disturbances, finding of rock in and on ice, dust in the arctic, open water at the farthest point north and south, why it is warmer near the poles, what produces colored snow in the arctic, where and how are icebergs formed, the tidal wave, clouds and fogs, arctic and antarctic winds, the centre of gravity, cannot reach the poles, and what is in the interior of the earth.

You'll find references to this rare 1906 classic in recent hollow-earth articles. Now you can own a copy of the original. Consider it. 4 1/2 x 7 paperback 280 pages

Cat. no. 20609

\$11.95

WOOD FOLK INSTRUMENTS

MAKING WOOD FOLK INSTRUMENTS

by *Dennis Waring*

Actually the first third of this book is about making simple instru-

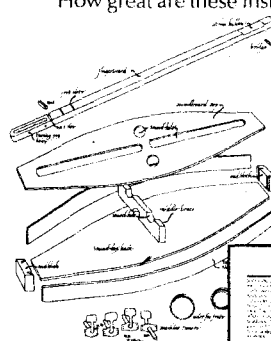


ments for kids like a beach bottle banjo, washtub bass, or flowerpot bells. But the back two thirds goes into making instruments like a hammered dulcimer, fretless banjo, plucked Appalachian Mountain Dulcimer, Tear-Drop Fiddle and Celtic harp.

Chapters include simple stringed instruments, wind instruments, percussion instruments, complex stringed instruments along with appendices

of charts tables, suppliers and the rest.

How great are these instruments? Not the best, I'm sure, but something you would nonetheless be proud to say you built. You get lots of photos and drawings, but this book covers so much ground so quickly, the how-to is not as



detailed as it could be. You have to have at least some wood-working experience. Maybe this is the place start before trying to duplicate a Stradivarius!

Interesting book.

Loaded with how-to.

Get a copy. build an instrument, and ruin people's hearing. (And have fun doing it.) A lot of info for the money. 8 1/2 x 11 softcover 160 pages

No. 5040

\$14.95

Spindle Turning

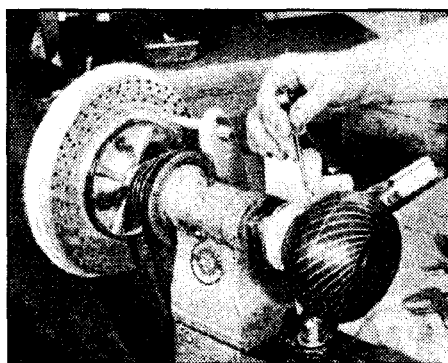
In this collection of 39 articles from Fine Woodworking magazine, some of the past decade's most accomplished and inventive woodturners share their secrets. They show you how to use the turner's gouge and master one of the most difficult of tools, the skew chisel. They also offer a wealth of clever shop tips, plans for making tools and gauges, and even advice about achieving the look of turned wood without a lathe.

Some of the articles you get are: a shop-built lathe duplicator, how to make a wooden flute, old-fashioned turners' gauges, the Louisville Slugger, building a spinning wheel, what bobbins do, coopered columns, ornamental turning, Holtzapffel revisited, buy the parts and build the bed, turning without a lathe, woodturning on a metal lathe, and much more.

Good stuff. Great text, how-to, hardware, and art. Get a copy. 8 1/2 x 11 paperback 88 page

Cat. no. 499

\$9.95



SPINDLE TURNING

by the editors of *Fine Woodworking Magazine*

"When it comes to efficiency, nothing beats the lathe. You can use it to size, shape, smooth and finish a piece of wood all in one operation. And the variety of useful things you can make on a lathe is vast — everything from porch pillars to baseball

Wood Turning Techniques

LATHES AND TURNING TECHNIQUES

by the editors of *Fine Woodworking Magazine*

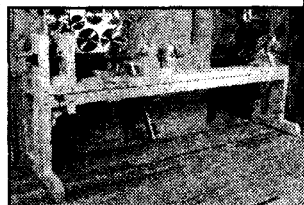
Great articles reprinted from the magazine. Color photos throughout. Great info!

I counted 36 articles with titles like: production tips from an architectural turner, tool rests and turning tactics, boatbuilder's bowls, turning large vessels, lathe duplicators, efficient spindle turning, the Old Schwamb Mill, Vermont Turning School, chasing large wooden threads, economy lathes, heavyweight lathes, the bowl gouge, woodturning chisels, chucks for woodturning, backyard timber, and much more.

A couple of articles of interest are those that will show you how to build a woodturning lathe: a beer-box lathe and shopmade lathes (a big one!). You really don't have to sell the kids to the gypsies to

raise the money to buy a lathe. You can build one. Fascinating ideas from people who have done it.

Great how-to.

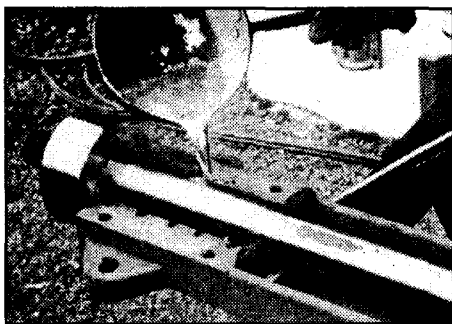


Fun reading. More ideas than you can try in a month of Sundays. Get a copy. 9 x 12 softcover 127 pages

\$14.95

No. 5006

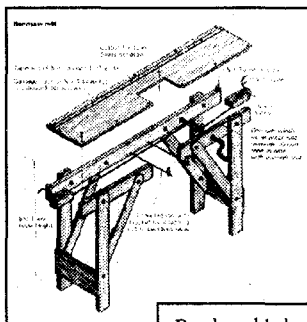
LINDSAY PUBLICATIONS INC, PO Box 538, Bradley IL 60915 • 815/935-5353



Woodworking Machines

WOODWORKING MACHINES

articles from Fine WoodWorking Magazine



Bandsaw-blade sharpening jig

pouring Babbitt bearings or running a three-phase motor on single phase, are applicable to many other machines as well.

Contents include: jointer



maintenance, choosing machinery, used machinery, made in Taiwan, tips

on buying Taiwanese machines, basic machine maintenance, restoring a rusty Titan, repouring Babbitt bearings, the dial indicator, converting to 3-phase power, precision, circular saws, using the tablesaw, choosing a blade, carbide-tipped circular saws, mitering on the table saw, aluminum miter jig, tuning up your lathe, router tables, the basics of the bandsaw, straight-line bandsawing, a bandsaw sawmill, machining backwards, repairing bandsaw blades, bandsaw blade resharpener jig, Japanese resaws, the jointer, shop-testing five jointer planers, homemade pin router, air-powered tools, quality in production runs, and more!

All of this is well-illustrated quality how-to. A must-have for woodworkers. Something every machiner nut (and that's you isn't it?) should be familiar with. Quality book. Fun reading, too. Get one. 8 1/2 x 11 softcover 106 pages
No. 5033

\$9.95

Great Craftsmen Own Great Tool Boxes

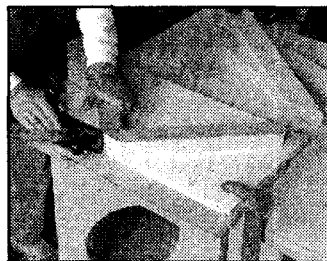
THE TOOLBOX BOOK

by Jim Tolpin

"A Craftsman's Guide to Tool Chests, Cabinets and Storage Systems."

Tool freaks have to have a way to store their valuables. Right? I hate to admit it, but the tool chests in this fine book are far, far better than any tools I own. The truth is, these are works of art. Even if you never build one of this quality, it's inspiring (or damned depressing) to see the tool chests true craftsmen are producing.

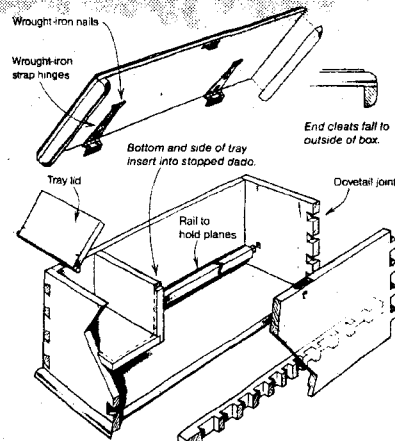
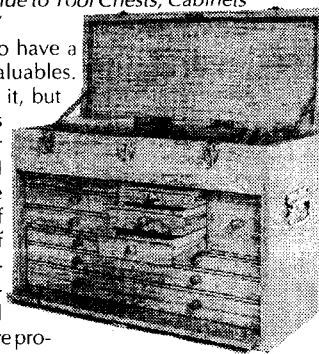
Chapters include: tool boxes and building of a nation, traditional-style tool chests, a student tool-chest project, designing in-shop tool storage, wall cabinets, standing tool cabinets, rolling tool carts, designing site boxes, open shoulder totes, lidded totes, wheeled site boxes, a toolbox for the road, and more.



This is an expensive, high-quality, coffee-table-

style book loaded with quality photos, as well as informative how-to. So what do you do with YOUR tools? Throw them in a gunnysack? Tain't it about time you did them justice and built a fine tool box from fine hardwood? This beautiful book will show you how. Expensive, but it delivers. Consider it carefully. 9x11 hardcover 200 pages
No. 5035

\$34.95



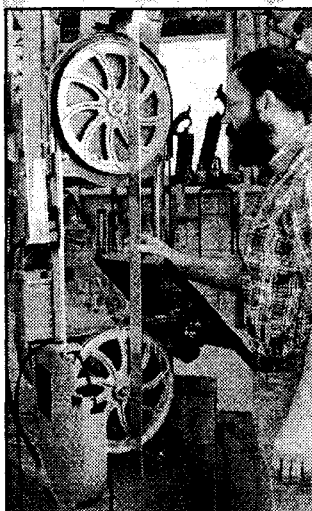
Master Woodworking Machines

MASTERING WOODWORKING MACHINES

by Mark Duginske

"Mark Duginske shows you how to choose, set up and tune your machines for safety, precision and efficiency... Duginske's systematic approach picks up where owner's manuals leave off, and it applies to all brands and makes of machinery. You'll also learn how to prepare stock effectively, and how to produce the joints and cabinet parts you need without any expensive add-on jigs..."

You get a chapter on the table saw, radial-arm saw, bandsaw, jointer and planer, drill press, and the router and shaper. You also get chapters on stock preparation and joinery.



This is practical stuff: shimming the fence, checking saw blade runout, testing parallelism and much more. Learn what bandsaw blade to use, how to fold it, how to adjust and true the wheels, and much more. The same goes for the other machines. You learn how to keep a woodworking machine accurate so that you can produce quality work. Lots of tips, hints, great illustrations of machines and useful jigs.

Good book. A bit expensive, but much cheaper than the hardwood ruined by a bad machine. Worth having. 8x10 softcover 245 pages
No. 5036

\$24.95

THE COOPER AND HIS TRADE

by Kenneth Kilby

Make a barrel. Go ahead! I dare you! Think about it. You take lumber, cut it into a number of curved, tapered staves, install circular end boards and hold it all together with iron bands. And on top of that, everything has to be so finely fitted that the finished product is water tight!

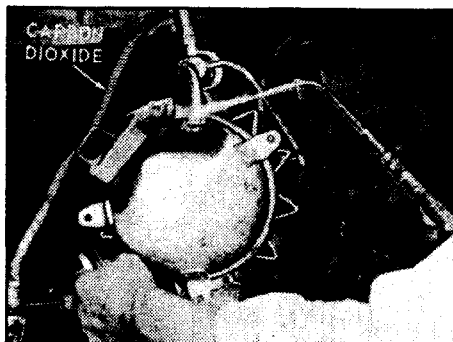
You get the technology of barrel making in the first five chapters. The history of barrels and the men who made them is revealed in the remaining chapters. You'll see buckets, barrels, and tools that go back as far as the Roman times in England. And you'll see the power machinery that is still used to make barrels for distillers.

This is fascinating reading on a technology that is disappearing. Good book. Consider it. 6x9 paperback 192 pages: 56 of photos - 87 drawings
Cat. no. 482

\$19.95

Make a Barrel!





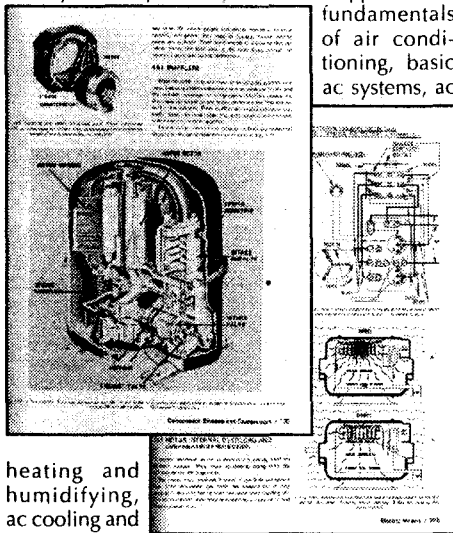
Refrigeration! AC!

MODERN REFRIGERATION AND AIR CONDITIONING

by Althouse, Turnquist, and Bracciano

Here is a classic technical textbook on cooling. It's a big hardcover an inch and half thick, big hardcover, loaded wall-to-wall with photos, schematics, diagrams, on just about anything you're likely to encounter.

Chapters include fundamentals; tools and materials; basic refrigeration systems; compression systems and compressors; refrigerant controls; electrical/magnetic fundamentals; electric motors; electrical circuits and controls; refrigerants; domestic refrigerators and freezers; installing and servicing small hermetic systems; commercial systems: applications, services, heat loads and piping; absorption systems, special systems and applications, fundamentals of air conditioning, basic ac systems, ac



heating and humidifying, ac cooling and dehumidifying,

ac distribution and cleaning, heat pumps and central air, ac heat loads, auto air conditioning, solar energy, technical characteristics, career opportunities, and dictionary of technical terms.

You'll learn how to charge a refrigeration system, how a hermetic split-phase induction motor is wired up, how liquid nitrogen is used to cool the trailer on an 18-wheeler, how and where two-stage axial compressors are used, and a thousand other things.

More hardware, cut-away diagrams, nuts-and-bolts how-to than you'll find in a dozen other books put together. In print since 1968. Updated every couple of years to stay current. This is the newest edition. Put one in your reference library. Buy one for your library and write it off your taxes. It will be there when you need it! Get one. 8 1/2 x 11 hardcover over a thousand pages

No. 133

\$51.95

THE PHYSICS OF UFO FLIGHT?!

UNCONVENTIONAL FLYING OBJECTS

by Paul R. Hill

Paul Hill was a well-respected NASA scientist when, in the early 1950s, he had a UFO sighting. Soon after, he built the first flying platform and was able to duplicate the UFO's tilt-to-control maneuvers. Official policy, however, prevented him from proclaiming his findings. "I was destined," says Hill, "to remain as unidentified as the flying objects."

For the next twenty-five years, Hill acted as an unofficial clearing house at NASA, collecting and analyzing sightings reports for physical properties, propulsion possibilities, dynamics, etc. To refute claims that UFOs defy the laws of physics he had to make "technological sense...of the unconventional object."

After his retirement from NASA, Hill finally completed his remarkable analysis. In *Unconventional Flying Objects*, published posthumously, he presents his findings that UFOs "obey, not defy, the laws of physics." Vindicating his own sighting and thousands of others, he proves that UFO technology is not only explainable, but attainable.



here's a book that even I find interesting. This guy knows his science. He talks about how UFO's can be real simply because they do NOT defy the laws of physics. And he shows why. If anyone is going to make a case for ANY UFO sighting, I'd listen to this guy's arguments long before the vast majority of "experts".

Interesting book. No doubt about it. I'm sure crazies will use this as proof for their theories just like certain other people are determined to prove that the Shroud of Turin is for real. Truth is, neither this book nor the shroud is going to prove anything. Just accept this for what it is: something interesting to read. Consider it. Off-the-wall. 6x9 softcover 429 pages

No. 789

\$15.95

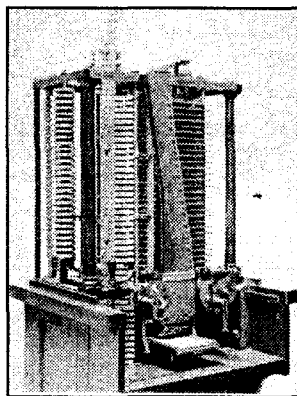
Build That STEAM POWERED COMPUTER You Always Wanted...

CHARLES BABBAGE

On the Principles and Development of the Calculator

writings of Charles Babbage

Charles Babbage, George Boole, Alan Turing. Big names in computer technology. You should at least be aware of their names. More than that, you should be aware of the mechanical computers



Babbage was designing in the 1840's. Yes, 1840's. He was curious about almost everything, but was especially interested in mechanical devices.

Here is a master reference written by Babbage (1792-1871) himself and others. The

first 130 pages or so are extracted from his long out-of-print autobiography.

Then, as far as I'm concerned comes the good stuff. You get articles, sketches, computations of his mechanical calculators extracted from the pages of "Babbages Calculating Engines" published in 1889.

"His dream has only now come true, but to convince yourself that Babbage was indeed far ahead of his time, turn to the articles by the inventor and by his contemporaries that explain the principles and operation of his brilliant—but never completed—calculating machines.



There is a 60-page study by Dr. Dionysius Lardner of the first great invention, the *Difference Engine*; a 70-page work by L. F. Menabrea on the vastly improved *Analytical Engine*. ..."

The Analytical Engine was a mechanical programmable computer that could calculate almost anything. When it was invented however, machine tools were still in their early days of perfection. Building such an engine at that time would be difficult. But his tests, ideas, and curiosity got him respect. Babbage worked with people like Whitworth, Herschel, Holtzapffel, and others.

Maybe it's time to build your own mechanical computer. It would probably be expensive and difficult, but it certainly would be impressive. Here are the raw documents that can get you going. Reasonably priced. Get a copy. 5 1/2 x 8 1/2 paperback 400 pages

No. 5042

\$9.95

Classic College Physics Text! A Master Reference!

COLLEGE PHYSICS

by Sears, Zemansky & Young

If there was ever a classic college physics text, this is it. It has been around a LONG time (since 1947). I was referring to this text when I was in high school researching adiabatic, isentropic expansion processes for liquid air machines. It was great then, and it's better now.

You get the straight scoop on all aspects of physics which should be of importance to any mechanic and any experimenter. You'll find plenty of math, none of it too heavy, that allows you to predict the performance of everything from weights and springs, rockets, RL electric circuits, engines, pipe organs, electromagnets, light and lenses, spectroscopes, and even nuclear physics.

What you get in this book are the

laws that govern energy and its use. If you intend to design machines, you should certainly know the simplest things such as the laws of motion, center of gravity, inertia, and more. If you're into steam engines, do you know the difference between Fahrenheit, Celsius and Rankine systems? What is specific heat? What is an ideal gas? How about sound and wave motion? Building a Tesla coil or Wimshurst machine? You had better study up on electrostatics. What's the definition of an ampere of current? And on and on.

If you try to build anything of any complexity that comes anywhere near modern state-of-the-art, you had better know what's in this volume. If you don't, you'd have a better chance of hitting the moon with a slingshot.

This is a 'must have reference' book. Every public library should have a copy. Every designer, builder, researcher, and experimenter should have a copy for reference. It's far too expensive, but then, it IS a college text that is being constantly updated. This is the most recent edition. This is the way the real world works, and I'll bet you don't even know a tenth of what's in here. It doesn't have to be that way. Get yourself a copy, and get learning. It's great! 8x10 hardcover 880

pages

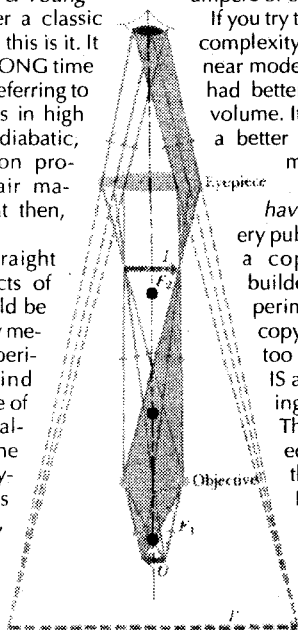
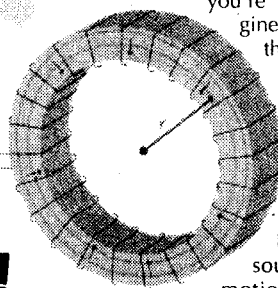
Cat. no. 577

\$69.95

Partial Contents

vector addition, force, equilibrium, Newton's first law, friction, motion, average velocity, instantaneous velocity, freely falling bodies, relative velocity, Newton's second law, mass, motion in a plane, circular motion, centripetal force, motion of a satellite, work, kinetic energy, gravitational potential energy, power, mass and energy, impulse and momentum, inelastic collisions, recoil, rocket propulsion, moment or torque of a force, center of gravity, couples, angular velocity and acceleration, moment of inertia, torque and angular acceleration, parallel-axis theorem, stress, strain, elastic modulus, harmonic motion, simple pendulum, physical pendulum, pressure in a fluid, pressure gauges, pumps, surface tension, contact angle and capillary, Bernoulli's equation, viscosity, Stokes' law, Reynolds number, thermometers, thermal expansion and stresses, heat transfer, quantity of heat, heat capacity, change of phase, conduction, convection, radiation, Stefan-

Boltzmann law, ideal gas, phase diagrams, triple point and critical point, vapor pressure, the cloud chamber, energy and work in thermodynamics, adiabatic process, isochoric process, internal energy of an ideal gas, heat engines, internal-combustion engines, steam engines, the refrigerator, the Carnot cycle, absolute zero, energy conversion, molecular theory of matter, Avogadro's number, molar heat capacity of a gas, crystals, periodic waves, speed of a transverse wave, water waves, sound waves, Doppler effect, electric charges, Coulomb's law, Gauss's law, electric potential energy, Millikan oil-drop experiment, cathode-ray oscilloscope, capacitors, effect of a dielectric, current, resistance, electric field of the earth, Kirchhoff's rules, ammeters and voltmeters, magnetism, Thomson's measurement of e/m , the Hall effect, direct-current motor, electromagnetic pump, and much, much more....



PHYSICS TEXT!

It almost reads like a magazine!

FROM ALCHEMY TO QUARKS

by Sheldon L. Glashow

What a book! This is a mixture of science, history, and showmanship. It's just plain fun if you're curious about the world around you. And if you're not curious then why are you reading THIS catalog?

This book "is addressed to the student who has not studied physical science or mathematics in depth. He or she must be conversant with algebra and have studied high-school chemistry or physics..."

Just about anywhere you open the book you'll find something fascinating. He starts out with a brief history of time, how the days of the week got their names, how we measure time, length and on and on. Did you know in Thailand the unit of measure is the Nin and .0212 meter in length? That we buy oil in 42 gallon barrels and wine in 31.5 gallon barrels?

How about a short history

of thermometers, phlogiston, genealogy of the Bernoulli family, or how chemists came to believe in atoms? Do you remember a TV program years ago with James Burke called Connections? This book reminds me of that. This is popular history, real physics (yes, with problems), gossip and all kinds of fun things.

I'm fascinated by Erwin Schrodinger's equation which shows the wave function of an object moving in response to a force, in other words, it tells us how a photon can be a particle, yet act like a wave. Glashow tells us that Schrodinger slipped away in 1925 to write leaving his wife in Vienna. But the first thing he wrote was a letter to one of his old girlfriends in Vienna. She joined him. We don't exactly know who she was or what she was doing, but over the next twelve months Schrodinger cranked out an amazing

series of scientific papers. The world of physics had never seen so many fresh, earth-shaking ideas come out of one man in such a short period of time. She must have been one helluva woman! (And you thought science was cut and dried!)

This is a physics course for non-scientists. And it IS fun. You get all the standard material: motion, energy and momentum, behavior of gases, heat, atoms and elements, electricity, magnetism, waves, quantum mechanics, the world according to Einstein, inside the nucleus, elementary particles, and the standard model.

Physics is a study of the way the world works. This is a fun way to learn about basic principles that will help you understand why engines work, why certain elements combine only with other elements, why you can't have electricity flowing without magnetism, or how clocks can be set

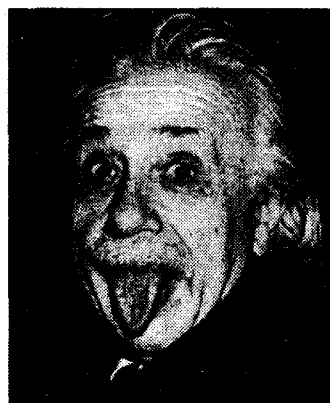
using the star. You'll also see that crazy nuclear physicist, Niels Bohr, blasting down the road on his motorcycle with some babe!

I'll say it again. Great book. Expensive. Of course. This is a standard text at Harvard University. But you really get your money's worth. I love it. Or can't you tell? 7 1/2 x 9 1/2 hardcover 692 pages No. 5010

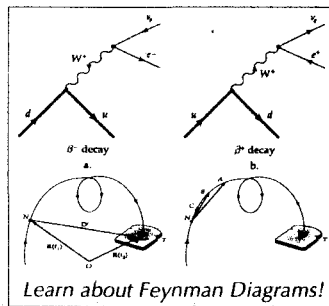
\$69.95



Niels Bohr dirt biking in a suit!



If I had a tongue like this, I could rule the world!



Learn about Feynman Diagrams!

Repair Your VCR!

MAINTAINING & REPAIRING VCRS

by Robert L Goodman

VCRs and computers are like manure. They're everywhere. Maybe it's time to think about learning these kinds of machines and earning some bucks. Or learning to recycle and turn the other guy's trash into something of value.

From the backcover,

"...From snowy pictures to garbled audio, you'll learn how to fix it quickly using the same techniques used by experts. Step-by-step instructions and hundreds of photographs, pinout diagrams, and drawings make it simple to tackle even the most difficult problems. Packed with helpful case studies, this book contains invaluable information gathered from the service departments of such companies as General Electric, RCA, Panasonic, and Sony.

You'll find in-depth coverage of: mechanical systems and electronic circuits used in consumer VCRs Test equipment, servo and control systems, camcorders and special VCR circuits, including HQ video and stereo and digital audio circuits.

Contains handy troubleshooting flowcharts."

This book has two functions. First, it tells us, the curious, how these machines work, and that's fun to know. Second, it tells some of us what we're getting into when we decide to start servicing. And that includes special knowledge, jigs, gauges, and electronic test equipment.

Good book. Expensive, but it delivers. Consider it. 7 1/2 x 9 softcover 495 pages
No. 3040 \$24.95

Repair CD Players

TROUBLESHOOTING AND REPAIRING

Compact Disc Players 2nd Edition

by Homer L Davidson

"Whether you're an electronics student or a practicing technician, this book will prove an invaluable hands-on guide. Beginning with basic CD player principles and ending with schematic diagrams - straight from more than 11 different manufacturers - this heavily illustrated reference shows you exactly how to • remove and replace defective laser heads • troubleshoot and replace low-voltage power supply circuits • service signal circuits with a scope • repair servo systems • locate and replace defective slide and load motors • build an infrared tester • trouble shoot and replace defective audio components • and more

Covers home, portable, and car CD players."

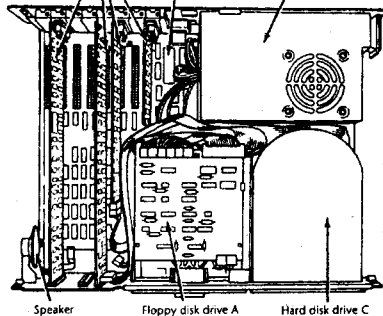
It looks good. This is the best that I've seen so far. Consider it. 7 1/2 x 9 softcover 488 pages
No. 3045 \$24.95

UPGRADING AND REPAIRING PCS

by Scott Mueller

This is as close to an everything-in-one book as I ever hope to see. It covers everything in detail: motherboards, memory, disk drives, expansion slots, power supplies, mass storage, CD-ROM drives, backup, sound boards, video boards, monitors, I/O ports and much more. This is a monster book that 15 found in bookstores. The publisher claims more than 650,000 copies have been sold.

Junk computers are available. You can recycle them using this. It covers the old and the new and gives technical details, specifications, error codes that I haven't found elsewhere. It even has a pin map for that damned microchannel bus machine that I took the sledge hammer to, a few years back!



The truth is this mutha weighs five pounds and has over 1500 pages of wall-to-wall reference material on disassembly, repair, and configuration of IBM PC compatibles. Not long ago an insurance man gave me an ancient machine that I passed along to an experimenter who promptly set it up as an efficient text processor at almost no cost. You certainly don't need a Pentium processor to type letters. This book is cheaper than the newest chip set.

Great book! It's so big that it's literally a pain to handle it. But they don't get better than this. I want you to send us an extra dollar to cover the extra shipping if this is the only book you order. 7x9 softcover 1546 pages
No. 3041 \$39.99

Fix Your Stereo, TV & More!

TROUBLESHOOTING AND REPAIRING

CONSUMER ELECTRONICS

WITHOUT A SCHEMATIC - 2ND EDITION

by Homer Davidson

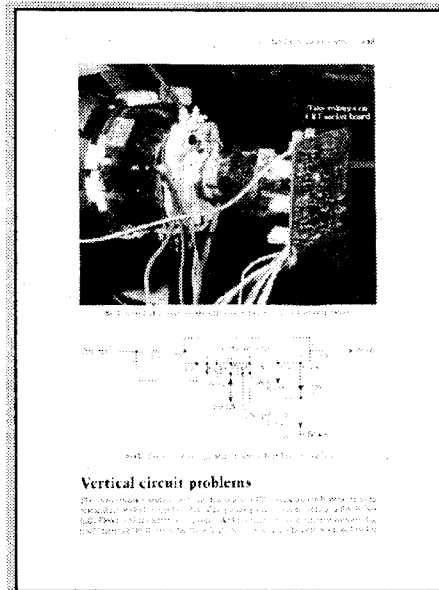
Davidson has been in the electronics repair business for more than 45 years. Here he shows you how he repairs all types of electronic equipment without using a schematic. It's all practical how-to.

For instance, he'll tell you that repairing stereo amps is easy, since you can use the working channel as a reference to find out where the bad channel is defective. OR... If you have a television that has lines bunched together and slowly crawling up the screen, you should look for a blown filter capacitor or poor low-voltage regulation. Or... Where to look if your VCR is not giving you audio on playback.

You get tips and hints on replacing defective components in audio amplifiers, cassette decks, color TV chassis, power supplies, VCRs, car radios, black and white TV's, compact disc players, and am/fm receivers.

You're expected to know something about electronics. This is not an electronics course. These are tricks of the trade taught by someone who has earned a good living doing it for decades. This is about ideas you can steal and adapt to your particular need.

So if you pick up a junk TV at a flea market or in the alley, you might very well pick up some ideas here that will help you find the problem and repair it quickly and inexpensively. Good book. Lots to be learned here. Unusual info. I wish I had this guy's experience! Get one. 7 1/2 x 9 paperback 286 pages
No. 3067 \$24.95



MICROWAVE OVEN REPAIR

by Homer L Davidson

"Step-by-step instructions and hundreds of detailed working illustrations and photographs demonstrate how to install a new fan motor, fix a defective switch, replace a magnetron, perform leakage tests, and much more.

Inside you'll find: ...Specific solutions to more than 200 common microwave oven malfunctions."

Next time you try to microwave a 'possum you



scraped off the road and it explodes in the microwave gumming up the whole works, you won't have to suffer the embarrassment of taking it to a repairman to have it fixed. You can do it yourself. Get

Repair Your Microwave

one. 7 1/2 x 9 softcover 455 pages

No. 3030

\$24.95

LISTEN IN ON Phone Calls!

TUNE IN ON TELEPHONE CALLS!

by Tom Kneitel

"Guide to intercepting cellphone, cordless, and other phone calls on scanners & shortwave receivers" 3rd edition.

It's easy to pick up cordless telephone conversations. Personally, I've got more important things to do than listen into someone else yacking on a phone, but if I want to listen in on cordless phone calls, the how-to is here. If you want to break the law and listen in on fragments of cellphone conversations, you can do that, too, with just a little more trouble. The books I've seen tell me that after dark, conversation shifts toward an XXX rating. That could be an adventure...

Chapters include hardware, cellular car phone calls, IMTS non-cellular car & aero phone calls, cordless, phone maintenance & repair services, hf coastal maritime calls, high seas phone calls, off-shore drilling rigs, railroad, MARS, satellite and much more.

A bit expensive, but the information is accurate, non-nonsense and hard-to-find. If this is your thing, this is one of the better books I've seen on the topic, and something you should consider. If you're calling from a touch-tone phone.... 6x9 softcover 160 pages

No. 3059

\$16.95

PIRATE RADIO (no eyepatch required)

THE COMPLETE MANUAL OF PIRATE RADIO

by Zeke Teflon

If you want to go underground and run your own pirate radio station, this booklet will tell you how to go about it. Chapters include preliminary considerations, getting away with it, to buy or build, the studio, transmitters, antennas, mobile operation, finding parts, test equipment, safety measures, and technical references.

You get schematics and parts lists for building a one-watt and a five-watt FM transmitter. You get practical details on antennas and coax, and lots more.

I've always thought about building a small FM transmitter to be used unlicensed for a short time during disaster relief after tornados or hurricanes, for example, when local radio stations might be off the air. Take the battery operated transmitter to the highest site in town and you could be on the air broadcasting vital information. That makes sense. But broadcast? Who would want to listen to your bizarre political opinions and warped musical taste? Not me! (Got my own, thank you...)

Unusual. Somethin' you ain't supposed to know or do. 5 1/2 x 8 1/2 booklet 48 pages

No. 3011

\$5.00

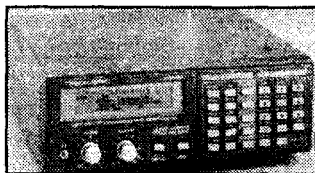


SCANNERS! Secret Frequencies!

SCANNERS & SECRET FREQUENCIES

by Henry L. Eisonson

Buy a scanner and snoop! Careful, though. It could cause an incurable case of nose-trouble. But should you get addicted, here's a book that will help when you start to go through withdrawal.



Y o u get a no-nonsense how-to and what-for introduction into scanning. Chapters include antennas, scanners, scanner modifications, FCC, the spectrum, amateur radio, military radio, scanning Uncle Sam, CB, telephones (yes, including cellular which is illegal), advanced scanning and much more. You learn how to find frequencies and listen in on phony faith healers and their wireless systems, sports events, security details, fax machines, satellite frequencies and lots more.

If you're just getting into scanning, you need this. Obviously it covers so much, the detail won't be extensive. But it is surprising how much valuable info is packed into this popular book. You'll find something on just about everything. Get a copy and get started. Worth having. 5 1/2 x 8 1/2 softcover 318 pages

No. 3058

\$19.95

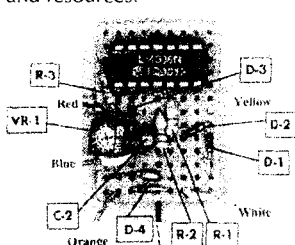
Scanner Mods!

THE ULTIMATE SCANNER

by Bill Cheek

Cheek will teach you how to take a commercially available scanner and make all kinds of modifications that will enhance it's usefulness, and come close to ultimate scanner.

Chapters include communicating is a hobby, what is an Ultimate Scanner?, general modification hints and tips, memory mods, subsidiary carrier authorization, data tone squelch, cellular mods, computer interfaces, fund stuff, epilogue, glossary, and resources.



This is wall-to-wall how-to to help you connect a scanner to your computer, add memory for scan channels, and, yes, even remove the lockouts that prevent scanners from receiving cellular phones (listening to such calls is illegal). You get nuts and bolts instructions like where to clip a diode, where to add components, how to change other parts. Most of the models mentioned are PRO models and a few BC models. He doesn't mess with early scanners since they're so badly out of date.

If scanning unusual radio channels is something you love to do, or is something you want to get into, this book is a place to start, especially if you have even a little experience with electronics. This book can dramatically increase the capabilities of your store bought scanner. Expensive but worth every penny for the guy who can use it.

8 1/2 x 11 softcover 242 pages

No. 3026

\$29.95

Fix da Phone!

OLD-TIME TELEPHONES!

Technology Restoration and Repair

by Ralph O. Meyer

Got an old crank wall phone?

An "Elliot Ness" candlestick phone? Or later?

This book impressed me not only with photos and history on old phones, but with the history of phone circuitry as well. Get your old phone working!



Very informative info on such things as anti-sidetone circuits, the Western Electric varistor equalizer networks, and much more. You get more theory and history than restoration how-to. A far better book than I had expected it to be. Interesting. 7 1/2 x 9 softcover 290 pages

No. 3032

\$19.95

Telephony!

UNDERSTANDING TELEPHONE ELECTRONICS

by Stephen Bigelow

"The book explores speech signal processing, telephone line interfacing, tone and pulse generation and ringers.... The book spells out the advantages and disadvantages of digital transmission, sampling coding, and the various formats of multiplexed systems.

The Central Office and all the various transmission modes are included, providing a complete look at telephone systems. Plus, you learn the evolving features of network transmission and wireless telephones..."

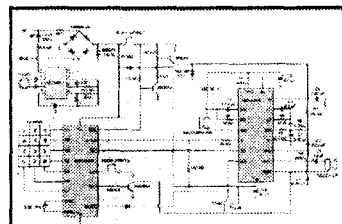
Y o u get only a little info on old

phones. This is about today's electronic telephones. You'll learn about interfacing 2-pair local loops using amplifiers, discover latest digital transmission techniques, and even cover A/D and D/A conversion. You'll find a complete chapters on networks, on modems and faxes, and on wireless telephones.

This is not a book on hooking up an old phone This is a detailed look at how the modern phone system works, and this kind of information is not easy to find. Detailed and well-illustrated (some diagrams right out of the Bell Labs). Great reference. Must have for phone fanatics. 7 1/2 x 9 softcover 367 pages

No. 3047

\$24.95



Make Mirrors

HOW TO MAKE MIRRORS

reprinted by Lindsay Publications

"The Brashear, rochelle salt, and formaldehyde formulas are given, together with a detailed discussion of the precautions which should be taken to avoid danger and the technique which has been found to yield the most satisfactory results at the bureau. Methods are also given for the production of reflecting films on glass by the chemical deposition of copper, platinum, or lead sulphide, by cathode sputtering, and by the condensation of vaporized metals."

Be warned that should you mix some of the chemical too strong, there may be a dangerous explosion. But the manual goes into great detail about eliminating the dangers, and the practice of silvering. It is written for the beginner and leaves very little to the imagination. A reprint of a 1931 booklet issued by the Bureau of Standards. Excellent! 5 1/2 x 8 1/2 booklet. 15 pages 2 drawings. No. 885 \$3.00

Grow Crystals!

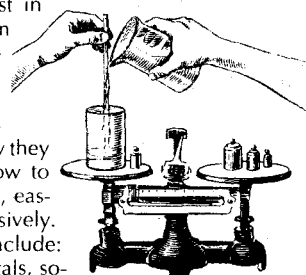
CRYSTALS AND CRYSTAL GROWING

by Holden & Morrison

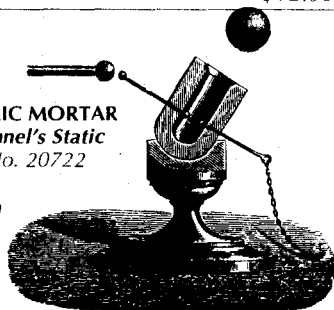
Crystals exist in everything from your TV set to the castings you pour. Learn about what crystals are and how they grow. Learn how to grow your own, easily and inexpensively.

Chapters include: solids and crystals, solutions, solubility diagrams, two methods for growing crystals, building blocks for crystals, twelve recipes, symmetry, arrangements of atoms, cleaving and gliding crystals, melting and transforming, piezoelectric effect, optical experiments and more. You also get sources of supplies, making a spectroscope, suggestions for research, more books and articles.

Excellent book. Easy to read and understand. It was first published in 1960, so you know it's a good book. Get a copy. A great science fair project. 5x8 softcover 318 pages No. 546 \$12.95



THE ELECTRIC MORTAR
from Deschanel's Static
Electricity No. 20722
(described
elsewhere in
this catalog)



Many of the books in this catalog are way underpriced. Paper prices have skyrocketed since those books were printed. When we run out, we'll have to dramatically raise the price of the books, or not reprint them at all. In other words, if you see a book you want, you had better order it NOW!

Temperatures – Very Low & Very High

TEMPERATURES – Very Low and Very High

by Mark W. Zemansky

For years now my favorite college physics text has been the one by Sears & Zemansky. I discovered it in high school when I wanted to build a gas liquefaction machine. Now I discover Doc Zemansky has done a whole book on the concept of temperature. Neat!

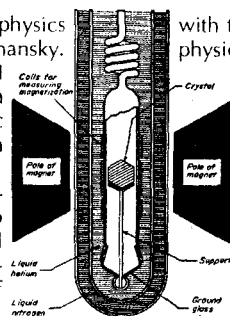
"This concise study of temperature and its extremes is designed to provide physics students, laymen and the general reader a greater understanding into the total meaning of 'temperature' as a concept....

How are extremes of temperature measured? How are such extremes of temperature produced? What is the international temperature scale? Also covered: isothermic and adiabatic processes, The Third Law of Thermodynamics, Fusion reactions, Planck's Radiation Law, Energy and entropy, Ther-

modynamics and negative temperature.

The initial chapters of this volume deal with temperature as it exists in macroscopic physics. The story behind the production and measurement of temperature near absolute zero (-450.67 F) is discussed in the succeeding chapters followed by a review of the production and measurement in the fifty million degree range. And finally, the last chapter goes beyond infinity into the realm of negative temperatures."

Think about it! Build yourself a 50,000 degree plasma torch! What couldn't you cut up with that? Learn how very low and very high temperatures are achieved. As for negative temperature, I haven't gotten to that chapter yet. Inexpensive good reading. Unusual. By someone who knows. 5 1/2 x 8 1/2 softcover 144 pages No. 590 \$4.95



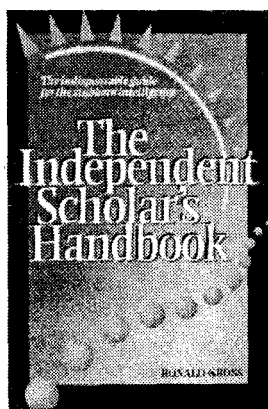
Be an Expert!

THE INDEPENDENT SCHOLAR'S HANDBOOK

by Ronald Gross

"The indispensable guide for the stubborn intelligence." Hear that? You have to have some intelligence if you're to find anything useful here. Actually, what makes you an intellectual is not intelligence but curiosity and energy. (Not many people like that. Maybe that's why my mailing list is so small...)

This about becoming an expert in any subject, about learning, about exploring, and creating. In what? Doesn't matter. Could be some obscure author, an historical event, one unusual baseball season, the sex life of cockroaches, or why the Lindsay family is so bizarre (boy! what a dead end topic!). Right now, I'm researching inductive voltage dividers for use in precision bridges for the measurement of very small capacitances. The trick is finding what information exists and bringing it together into a coherent mass. Discovering information is as much a



high as using it. And doesn't Lindsay Publications exist for just that purpose? ...to get high on learning?

Chapters include risk takers of the mind, from messy beginnings to the fruits of research, resources: where? what? who? how?, working with others, intellectual craftsmanship, wherewithal, sharing your work, the intellectual pleasures of your work, scholarship as your joy, interdependence among independent scholars, and appendices.

You get ideas for internships, setting up your own institute, publishing your work, entering a new field, developing your project, accessing databases, getting interlibrary loans, corresponding with colleagues, lists of unusual bookstores, getting copyrights on your work and much more.

Part of this is nuts-and-bolts, but a lot of it is encouragement to learn, to be a leader, to think creatively. If you really like the kinds of books that appear in this catalog, then this book has something for you. No pictures. If you HAVE to have pictures, throw this catalog away, and go turn on the television. Otherwise, think carefully about this one. 6x9 softcover 301 pages No. 788 \$15.95

HOW TO BE A SUCCESSFUL CARTOONIST

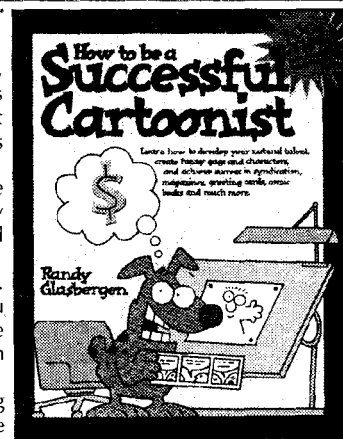
Randy Glasbergen

Glasbergen will show you how to make money cartooning, just part time if you want. He includes specific hints and tips contributed by a couple of dozen major cartoonists from Mort Walker (Beetle Bailey), Charles Schulz (Peanuts), Russell Myers (Broom-Hilda) and more.

Chapters include getting started, tools and techniques of the pros, developing great style and characters, creating funny cartoon ideas, turning your cartoons into cash, and resources and extra stuff.

Some cartoons are fine art such as the "late" Calvin & Hobbes. But you don't even have to draw that well to be successful. If you have gripes (don't we all), a goofy sense of humor, and/or a bizarre way of looking at life, you can use this book to turn some cash with cartoons. Maybe you can be famous, too.

Good book. Nothing much on drawing. Everything is on being a success. This is something you can do at home with little investment. One of the best "how to cartoon" books I've seen. Get a copy. 8x10 hardcover 122 pages No. 6093 \$19.95



123 Classic Science Tricks Revealed!

SECRETS OF 123 CLASSIC SCIENCE TRICKS & EXPERIMENTS

by Edi Lanners

Lanners has collected parlor tricks and experiments along with beautiful wood cut illustrations from the 1800's.

"These captivating projects will appeal to the curiosity of every child, arouse his or her interest in science; and almost effortlessly get across some of the basic principles of physics, chemistry, physiology, and electricity. It's a gold mine of ideas for school and science fair projects, and a treasure trove of easy-to-perform 'magic tricks' that are ideal for party entertainment...."

Try your hand at the induction top, a leyden jar & electrical tea tray, crystals on a thread, the camphor boat, floating iron,

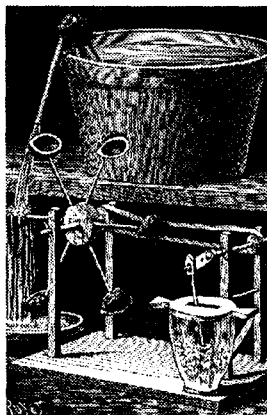
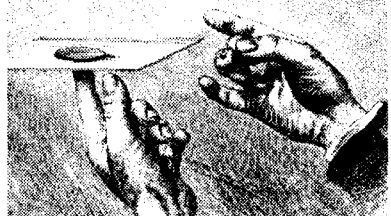
how to fill a sealed wineglass, a simple prism, sundials, glass globe into microscope, the fade-over effect, the Giant Hare, shadow pictures, the coin in the bottle, the disappearing coin, and many, many more.

Some of these are fascinating, some crazy, and some are guaranteed to get you thrown out of your favorite saloon! Interesting book of old time projects. Consider it.

5 1/2 x 8 1/2 paperback 192 pages

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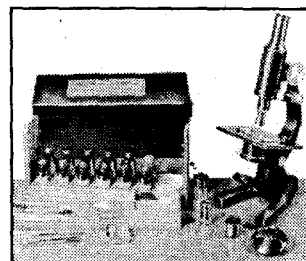
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by Dr. Georg Stehli

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"...salt crystals appear as jewels, a drop of water swarms with life, a butterfly's wings reveal a cascade of multicolored particles..."



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shows how to prepare the objects, what to purchase for the purpose, how to care for it; one's every question is anticipated and clearly answered. The

reader is taken into further exploration: viewing insect parts, diatoms, plankton, molds, leaves, ferns, fruit rinds, fish scales, animal parts.

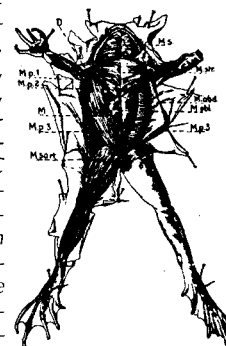
As we proceed, we learn step by step the techniques involved: use of chloroform, preparation of permanent slides, mounting in glycerine, preparing dye solutions, dissection, blood smearing. We learn how to detect fat, find Vitamin C in food substances, prepare a frog for examination, view and distinguish bacteria, use the oil-immersion objective, dye bacilli spores, do microphotography, cut sections with the microtome.

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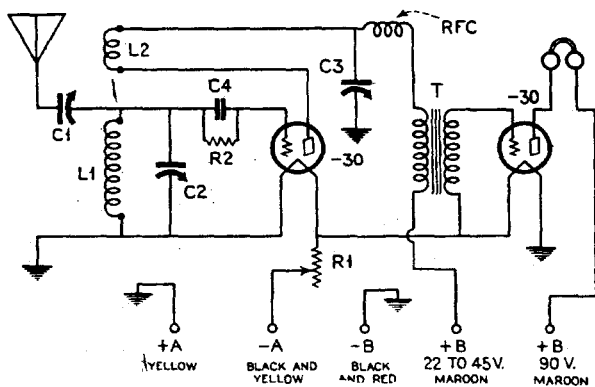
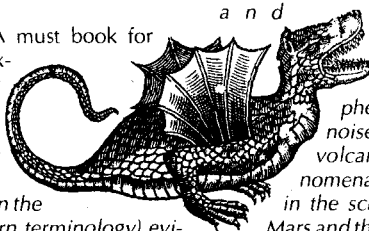
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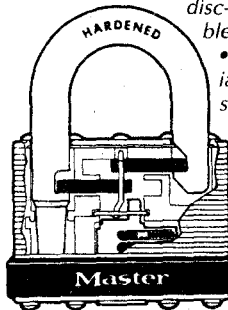
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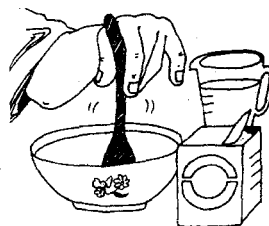
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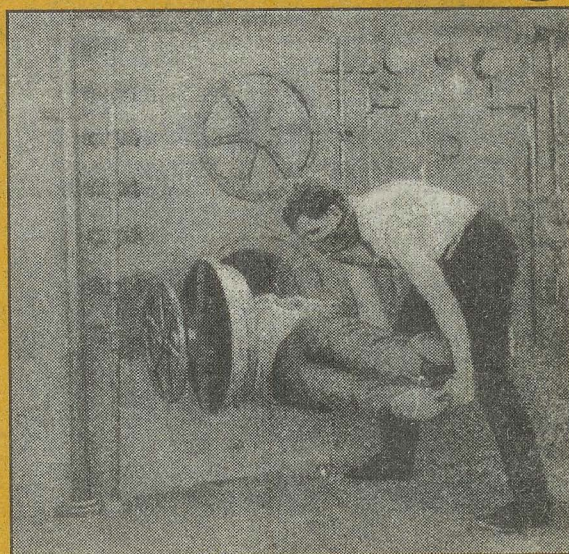
Lately, the Postmaster Has Been Stuffing **STRANGE MAIL** into Lindsay's Post Office Box!

In fact, one day, Lindsay actually discovered one of his customers here wedged between a stack of letters and packages. Or should I say, one of his former customers.

This gentleman had purchased so many useful how-to books from Lindsay over the years, that he routinely would disappear into his basement laboratory for weeks at a time. More than once, his lonely wife hired search teams to look for him.

Recently, after he didn't return from the basement for almost six months even after she yelled down to him that the new Lindsay catalog had arrived (an old trick she had used many times before), she found the courage to venture into the cellar herself. There to her dismay, she found her husband very cold and very stiff yet with a big smile on his face. He had passed on to that big laboratory in the sky doing what he enjoyed doing most...

Worse, she discovered her husband had canceled his life insurance so he could use



the money to buy supplies and essential equipment. She had no money left to bury him! And she "knew" it was Lindsay's fault.

To get even with Lindsay and his evil book business she sent her very rigid former husband via Priority Mail to Lindsay, and told *him* to dispose of the remains. Lindsay almost freaked out! Ever since then, he collects his mail wearing a surgical mask and rubber gloves.

The moral? Hey! Lindsay books are great, but you should periodically come out of the basement to let friends and relatives know you're still breathing! Please! Lindsay and his Postmaster don't need any more mail like this!